W.S.S.
WAR SAVINGS STAMPS
ISSUED BY THE
UNITED STATES
GOVERNMENT

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL

EDITORS:
CHARLES CHASSAIGNAC, M. D. ISADORE DYER, M. D.
COLLABORATORS:
C. C. BASS, M. D., Prest., Amer. Soc. of Tropical Medicine.....
JOHN M. SWAN, M. D., Secty. American Soc. of Tropical Medicine..... } *Ex Officio*
P. T. TALBOT, M. D., Secretary Louisiana State Medical Society..... *Ex-Officio.*
RUPERT BLUE, M. D., Surgeon General, United States Public Health Service.
H. D. BRUNS, M. D., Tulane University of Louisiana.
C. F. CRAIG, M. D., Col., U. S. A.
S. T. DARLING, M. D., Sao Paulo, Brazil.
W. H. DEADERICK, M. D., Hot Springs, Arkansas.
E. M. DUPAQUIER, M. D. (Paris), Tulane University of Louisiana.
A. G. FRIEDRICHS, M. D., New Orleans, La.
J. T. HALSEY, M. D., Tulane University of Louisiana.
JOS. HOLT, M. D., New Orleans, La.
F. A. LARUE, M. D., Tulane University of Louisiana.
E. S. LEWIS, M. D., Tulane University of Louisiana.
R. C. LYNCH, M. D., Tulane University of Louisiana.
E. D. MARTIN, M. D., Tulane University of Louisiana.
R. MATAS, M. D., Tulane University of Louisiana.
AUGUSTUS McSHANE, M. D., Greenwood, Miss.
PAUL MICHINARD, M. D., Tulane University of Louisiana.
C. J. MILLER, M. D., Tulane University of Louisiana.
F. W. PARHAM, M. D., Tulane University of Louisiana.
E. A. ROBIN, M. D., Tulane University of Louisiana.
W. H. SEEMANN, M. D., Tulane University of Louisiana.
ALLEN J. SMITH, M. D., University of Pennsylvania.
EDMOND SOUCHON, M. D., Tulane University of Louisiana.
E. R. STITT, M. D., Rear Admiral, U. S. N.
J. A. STORCK, M. D., Tulane University of Louisiana.
R. P. STRONG, M. D., Harvard University.
ROY M. VAN WART, M. D., Tulane University of Louisiana.

Vol. LXXI JULY, 1918 No. 1

EDITORIAL

THE LOUISIANA LEPER HOME.

During the month of May the Commission from the United States Public Health Service visited the Louisiana Leper Home, among other places, in the survey of favorable sites for the National Leprosarium authorized by Congress in 1916.

The Louisiana Leper Home began operation on December 1, 1894, when ten lepers were transferred from the pesthouse in New Orleans to the present site of the home. The old cabins at first occupied were habitable, though crude.

In twenty-four years a colony of modern cottages, well constructed, with conveniences of steam heat, running hot water, with modern facilities for bathing and other comforts, has come into

existence. Of nearly three hundred inmates, almost all have voluntarily sought the asylum of the institution, which has been diligently and faithfully administered by the Sisters of Charity of the order of St. Vincent de Paul. From 1896 until 1902 the Board of Control in charge of the home had little interest in the treatment of the disease; but in the past sixteen years treatment has been offered and accepted, with the result that twenty cases have been discharged as cured and a large number have been ameliorated.

The average admissions for the period of existence have been about one a month. In some years the number has been larger than in others.

The point of striking importance in the biennial reports of recent years has been the types of recent admissions, in which the tubercular form is by far the largest number. The conclusion must be drawn that old cases of leprosy outside the home are no longer found and that the recent admissions are of recent occurrence.

Leprosy has been known in Louisiana and along the Gulf of Mexico as far as Florida since the last quarter of the eighteenth century. The proximity to the West Indies and its peoples, known to have lepers among them, and the more frequent contact with the colonies of Latin countries, probably will explain the importation of leprosy to Louisiana so early in the history of this country. The Atlantic seaboard has less occasion for such and, except in the French colonies of Nova Scotia, no like history of leprosy obtains. The surviving lepers at Tracadie, New Brunswick, would argue this.

The opportunity of studying leprosy in Louisiana and the need of segregating the victims of this disease together claimed early attention. The incidence of leprosy in the United States is not known; it is known, however, that the majority of the States have had one or more lepers in the past ten years and that the disease has been reported with much more frequency in recent years. The need of national care of leprosy has been recognized because it is so widespread.

The Louisiana Leper Home has succeeded in segregating lepers so far as is known. More than this, it has demonstrated that this may be done without publicity and with the willing consent of the leper in most cases. The segregation of lepers has permitted their treatment in some cases to the point of success.

A National Leprosarium could do even more, for it would add the scientific laboratory and the intensive method of application of existing treatments.

The location of a National Leprosarium is momentous, because it must consider provisions for many years to come, for leprosy has been let loose over most of the United States and the disease is slow in developing.

The majority of cases in the United States to-day are found in New York, Massachusetts, Florida, Mississippi, Texas and Louisiana on the Atlantic and Gulf seaboards, and in California on the Pacific side. The Middle States have shown less of the disease, excepting Minnesota.

The conclusion that the disease develops more along the seacoast might be drawn, and would argue that any site chosen for a national hospital should be as remote as possible from the places of ready spread of the disease. An equable climate would seem to be the ideal in choosing a site.

It might be added, finally, that in Louisiana the objective in establishing a Leper Home was to eradicate the disease in the State; if the Federal Government takes over the Louisiana Leper Home no such objective can be attained for another generation.

VENEREAL DISEASES AN ACTIVE PUBLIC HEALTH QUESTION.

The Louisiana State Board of Health has undertaken the attack on venereal diseases. A report on the activity of the Board has recently been issued and its purposes are comprehensive. Provision is made for the careful record of each patient and disease, to be reported by name or number to the Board of Health, together with data as to the degree of infection and probable source. The migratory patient is required to give the record of prior treatment and the name and address of physician. While the name of the patient is not required on first report, neglect of treatment, or failure to give the information as to prior treatment, makes it mandatory that the name of the patient should be recorded.

Hospital patients are to be recorded and reported, and the superintendents of hospitals are to be held liable for the notification to the Board of Health of any violation on the part of the patient. The law covers also the cases of criminals and prisoners who may be venereally diseased.

There is a provision for the marriage license which must require a form of certificate showing freedom from venereal disease on the

part of the male contracting party within seven days prior to issuance of the license. The laboratory tests are to be made by the State Board of Health or by laboratories recognized by the State Board of Health. Infraction of the law by a clerk issuing license is liable to imprisonment of one to five years, and disclosure of information so legally obtained is liable to punishment by imprisonment. A physician making false statement in the certificate will be guilty of perjury and will lose his license. Ministers or others empowered to conduct the marriage ceremony who celebrate such marriage except under a license properly dated within seven days are liable to imprisonment of one to six months.

Hospitals for venereal diseases, or arrangement in existing hospitals for their care, is contemplated. Special medical officers, qualified by previous instruction in venereal disease, are to be assigned to care for such cases.

The report emanating from the State Board of Health is much more comprehensive than our digest can convey, but it may be summed up as a most pretentious program and promiseful of many difficulties in administration.

The whole question not only invites, but demands, solution, and probably is more integrally vital in the economic salvation of the human race than any other; it always has been, and must be for a long time to come. Morals and venereal disease are concomitant, and the elasticity of the first will gauge the degree of the second. The prohibition of prostitution will not stop venery and law will not make morals. The enactment of laws will surely be educative, and their enforcement will tend to restrict immorality, and perhaps may in time induce better habits.

The medical profession is supremely interested, and Louisiana has just the same problem that faces all other States and all other countries in trying to meet a world-wide disorder and to overcome it.

We shall watch the efforts of the State Board of Health with much interest and with the hope of success. We believe, however, that any provision leading to the violation of the professional secret and disturbing the close and confidential relation between patient and physician should be eliminated. Not only is such a provision a violation of a sacred principle, but we fear that it would work against the very end sought to be attained by the law. A great deal has been accomplished by propaganda already, and more is to be gained by urging and teaching than by treating the careless or unfortunate as criminals.

DR. ARTHUR W. de ROALDES.

BOARD OF HEALTH OF NEW ORLEANS.

We have before us the biennial report of the Board of Health for the Parish of Orleans for 1916 and 1917. It makes interesting reading, and one experiences a sense of gratification after looking it over. The Board claims three conspicuous achievements for the two years—a new low death rate; diminution of communicable diseases; the eradication of plague in rodents.

It might well have added one step forward, the opening of the Isolation Hospital in December, 1916, equipped with the best safeguards and conveniences of the day. Only smallpox cases were received during 1917, but quite a number were treated, with the percentage of recoveries given as 100. This perfect mark entitles the Board, the Superintendent of Public Health, Dr. W. H. Robin, and the attending physician of the hospital, Dr. J. G. Stulb, to the warmest commendation.

OBITUARY

DR. DE ROALDES.

Arthur Washington de Roaldes, an esteemed collaborator of the JOURNAL for many years, a much-loved friend, died on June 12, 1918, aged over 69 years.

Born in Opelousas, La., he lived most of his life in New Orleans, though he studied in Europe and had traveled extensively and frequently. From the time of his graduation in medicine, his was a most active and useful career. As early as during the Franco-Prussian War of 1870 to '71 he distinguished himself for bravery under fire while serving with the Red Cross, receiving later the Cross of the Légion d'Honneur as a token thereof. In after years he was promoted to a high rank in the order.

To enumerate all of the achievements of De Roaldes would be a lengthy task and beyond our purpose. Yet, as his blindness during the last twenty years of his existence gradually removed him from the prominent position he occupied amid professional activities, it is not amiss to recall some of the most notable.

As House Surgeon of the Charity Hospital in the days when that officer had most of the surgical as well as executive duties on his shoulders, with a comparatively small staff to assist him, he established many improvements, and two, which did not bear fruit during

his incumbency, were due to his initiative—the inauguration of the ambulance service and the introduction of trained nurses in the hospital.

After his connection with the Charity Hospital, he was the first in the South to limit his practice to the ear, nose and throat, and he soon founded the Eye, Ear, Nose and Throat Hospital, which from the most modest beginnings became one of the most important institutions of its kind in the world. This hospital was his creation; he watched over it, nurtured it, worked for it like for a beloved child. It bears his impress, and he needs no other monument.

Why say more? The above would be plenty for any life. He was a good friend, an affectionate teacher, a real doctor, a useful citizen.

He had honors enough: valued member of special and general medical societies, here and abroad, national and local; emeritus professor of diseases of the eye, ear, nose and throat in the Graduate School of Medicine of Tulane University; chief surgeon of the Eye, Ear, Nose and Throat Hospital.

To his beloved and loving wife, whose devoted care made it possible for him to continue a fruitful existence long after the loss of his sight, we must express our most deep and sincere sympathy.

ORIGINAL ARTICLES

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. Reprints may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

THRIFT AND WAR-SAVINGS STAMPS AND LIBERTY BONDS.*

By MR. CHARLES JANVIER, New Orleans.

In the absence of Hon. P. H. Saunders, of New Orleans, who was to have addressed the Society on this subject, Mr. Charles Janvier, of New Orleans, was introduced and spoke as follows:

Mr. President, Members of the Louisiana State Medical Society, Ladies and Gentlemen:

Shall we continue to own ourselves, or shall we permit the German Kaiser to own us? There is no exaggeration in that question, and the answer which must be returned must not be expressed in bombastic phrase or in high-swelling periods. It must be returned in

*Delivered at the 39th Annual Meeting, Louisiana State Medical Society, New Orleans, April 16, 17, 18, 1918.

deeds which shall speak for themselves with an eloquence far greater than language can possess, and with a force which shall cause the soul of the nation to be stirred to its profoundest depths and crossing across the broad Atlantic shall strike terror into the craven soul of the German despot as he crouches, monstrous and murderous, upon his dishonored throne. (Applause.)

We know, ladies and gentlemen, the boys in khaki, and those in blue, are going to do their duty unflinchingly and heroically, but they must have behind them the united and determined people which will cause them to hold their heads up higher, if they know and feel that every fiber of American manhood tingles with the same love of country and with the same resolution as nerves their courage and animates their spirit.

The war in which we are engaged is not alone a war of nations; it is a life-and-death struggle between two great principles of government—autocracy on the one hand, with its imperious and barbaric maxim that "might makes right," and democracy on the other, with its guarantee of peace and good-will to all men, of freedom to the individual and of independence to the State. Between these two contending principles there can be no compromise. It must be a fight to a finish, and in that fight must be enlisted not only the heroism of those whom we have sent to the front, but the stern determination of those who remain behind.

We are accustomed to say the boys at the front will do their bit. Ladies and gentlemen, in what does that bit consist? It consists in leaving home, in leaving their mothers and wives and sweethearts and children and their jobs. It means leaving everything to take part in the greatest game of chance the world has ever known: on one side, life; on the other, victory. When victory is earned, what do they get, those who survive? The right and privilege to return home and to begin life over again, while we who have been staying at home all the time and enjoying the comforts of life have forgotten in a large measure the sacrifices that were made for us on the other side.

I need not tell such an intelligent audience as this that there are three things essential to the successful prosecution of the war—men, money and material. Men we will have from the loins of the people; money must come from us, and, with this money, material will be purchased. But bear in mind, ladies and gentlemen, the government does not want money only for money; it wants money

for what money will get, and we ought to be careful not only to save our money, but not to become competitors with the government in using labor and material for our own selfish purpose that might better be employed in furnishing equipment to the soldier at the front. If this suit of clothes I have on strikes me as being a little shabby, I ought to wear it longer and not get another suit, which I do not urgently need, because in buying another suit I might deprive some soldier of the material that goes into it and deprive the government of the labor necessary to make it. (Applause.)

The United States Government has devised two ways through which to raise money to prosecute this war. One is by taxation, and the other by bond issue. Economists have not yet decided what proportion of the expenditures should be borne by bond issues, which transfers a portion of the debt to posterity and makes posterity pay a part of the price we pay for liberty, the same liberty they will have, and what proportion taxation should pay. Some contend that it is 50-50, and others 40-60. But there is one thing absolutely certain, on which both political economists and business men will agree, and that is the United States Government is going to get the money in one way or the other. If the people will loan their money to the government, the government promises to return the money at a stated period, and the United States Government has never failed to carry out a promise of that character. While the government is using that money the government promises and will pay the highest rate of interest ever paid by the United States Government since the Civil War. Now, if we do not want to lend money to the government, the government will take it from us in the shape of taxation, and I do not suppose any man has ever heard of any interest being paid upon taxes, or any government returning taxes once paid to the government. Therefore, the proposition is simple—if you do not voluntarily lend money to the government, the government is going to get it, for we are going to win this war. (Applause.) If it takes an army of five million or ten million men, every resource this country possesses will be used, and money will be spent in order that Old Glory be victorious in the end. (Applause.) Not only will we be victorious because of the heroism of our soldiers and of the determination of our people, but there is another reason, stronger, perhaps, than those two, and that is, we have right upon our side, and right, liberty and justice must eventually triumph, for upon the triumph of these

three great principles our safety, our happiness, our prosperity absolutely depend.

Some one once said that it was not the genius of Wellington, nor the gallantry of the allied armies, nor the timely arrival of Blucher which made impossible the victory of Napoleon at Waterloo, but the irrepressible operations of the unconquerable laws of justice and liberty; and those same laws operate with more inherent force to-day than in the time of Napoleon, and their operation may hasten or delay victory according to the way in which the people do their duty.

I have been asked to say something specifically to you on the question of War Stamps and Thrift Stamps. I had supposed by this time this subject was very familiar to every man, woman and child here. It is the most ingenious, the most generous proposition ever submitted to a people in the way of investment by any government.

There are three purposes to be borne in mind in connection with Thrift Stamps. First, raising money for the government; second, inculcating a spirit of thrift and the habit of saving among the people; and the third purpose is to bring every man, woman and child into closer relationship with Uncle Sam or with the United States Government. As for the second of these three purposes, our great President said, when the campaign was launched, if this country derived nothing more from this great war than the habit of saving, it would be worth to the country more than all the money and material expended in the war; and I take it he is a good judge, for he is sound, in my opinion, in pretty nearly everything he has touched thus far. (Applause.)

These War Savings Stamps and Thrift Stamps can be purchased almost everywhere. When I say we ought to lend our money to the Government I do not mean that you should lend your loose change; I do not mean that you should lend that part of your surplus that you have in a savings bank. You can easily do that. But I mean that you must put that money in Savings Stamps and Liberty Bonds. In addition to that, you should put money in it that you have gathered through self-denial, because self-denial is the door through which sacrifice enters, and until we have made sacrifices we have not associated ourselves with this war in the way we should. The men on the other side are making sacrifices, and I care not what sacrifices any of us may make on this side of the water they

will in no way compare with the sacrifices that are being made by the boys in the trenches and on the sea.

The War Stamps, the Thrift Stamps, your Liberty Bond was not invented for any of us to take refuge behind it. As Mr. McAdoo said the other day, we do not want 25 cents from people that ought to be $5 patriots, and $5 from people who can well afford $50. Ladies and gentlemen, who shall be the arbiter? I say conscience. Conscience never makes a mistake. The man who follows his conscience will never make a mistake. Let him invest in a Liberty Bond and in War Savings Stamps; if he follows his conscience, and it tells him to invest, he will have done his duty. Duty is the sublimest word in the language. A sense of duty, said Daniel Webster, pursues us ever. It is omnipresent, like the Deity.

When that illustrious American, whose character enriches the annals of humanity and sheds imperishable luster upon the pages of American history, Robert E. Lee, dismissed his half-starved and tattered veterans who suffered every form of privation in upholding the cause which they believed to be right, he told them that they carried to their homes the satisfaction which proceeds from a consciousness of duty well performed; that, in the eyes of the world, they had covered themselves with glory which shall remain undimmed and undiminished as long as human virtue and human patriotism remain the basis of admiration and esteem; that their greatest glory consisted in the fact that their able and venerated commander had told them they had done their duty, and had done it well. When conscience tells you that you have done your duty, and have done it well, you are all right.

General Pershing, when he reached Paris, visited the grave of Lafayette, it is said, and when he stood at that sainted spot he bowed his head and whispered, "Lafayette, we are here." It seems to me, ladies and gentlemen, that the great American people should stand in spirit beside the grave of George Washington, the great father of this splendid Republic, and with bowed heads should send to his illustrious shades this thrilling message, "George Washington, we are here. We are here in unity of spirit, with unflinching determination of purpose to preserve this Republic which you and your illustrious associates established for us. We are here to defend and protect that legacy of freedom you bequeathed to us. We are here to carry out the trusts committed to our hands. We are here, George Washington, in the accomplishment of that great and splendid purpose. We are here to pledge our lives and our

sacred honor." And if the American people will stand at that hallowed spot and in spirit make that pledge and live up to it, liberty and justice will rule the world. With our spirits and with the spirit of this great nation glorified by the lofty idealism of the issues for which we are contending, and which have been so eloquently expressed by our great President in his vivid messages to the American people, can it be possible that the least one among us who will prove recreant to his humblest duty and forfeit his share in that glory which will come to all of us when our boys come marching home, bearing triumphantly Old Glory crowned with the laurel wreath of victory? (Applause.) I, for one, don't believe it. I have an abiding faith in the patriotism of my people, which grows stronger and greater day by day, and becomes more gripping as each eventful day passes along to take its eternal place in the expanding landscape of the past.

Will you permit me to express a sentiment which I saw printed in a newspaper the other day, and which I think ought to be the feeling in every American breast?:

"Here's to the Blue of the wind-swept North,
When we meet on the fields of France.
May the spirit of Grant be with you all
As the Sons of the North advance!

"Here's to the Gray of the sun-kissed South,
When we meet on the fields of France.
May the spirit of Lee be with you all
As the Sons of the South advance!

"Here's to the Blue and the Gray as One,
When we meet on the fields of France.
May the spirit of God be with us all
As the Sons of the Flag advance!"

THE MEDICAL RESERVE CORPS.*

By MAJOR ISADORE DYER, M. R. C., New Orleans.

Mr. President, Ladies and Gentlemen:

You have heard a most interesting and illuminating address from the President. You have heard a most eloquent and inspiring address by a gentleman (Mr. Janvier) whom I have heard a great many times speak eloquently and well, but I have never heard him speak in terms which have been more inspiring than in the message

* Read at the 39th Annual Meeting, Louisiana State Medical Society, New Orleans, April 16, 17, 18, 1918.

he has brought to us to-night. I refer to the two previous speakers because I have no formal address. It was not intended that I should have; I am merely to talk for a few minutes about the Medical Reserve Corps.

To many of you there is no necessity for referring to the Medical Reserve Corps, because you are familiar with what it means. To some, the Medical Reserve Corps is not yet an open book. This is the first time that it has been my privilege to speak on this subject to so many men of the Louisiana medical profession at one time. I have had the opportunity of speaking to a few at a time; I have had the opportunity of speaking to most of those who have gone from Louisiana to the front.

It is the desire of the Medical Reserve Corps Examining Board to have a personal conversation with more men in Louisiana, to invite them into the Corps, to recommend them for commissions. An appeal has gone out from Washington in such a way that it has been, in a large measure, the occasion for the visit of our distinguished guests this evening to bring to you the message of the need for Medical Reserve Corps officers at this time and now.

Within the last forty-eight hours I have had a man say to me, "When you need me, let me know." We need you now! The same message goes to you who are not in the Medical Reserve Corps. We ask that you get an application blank at the office, or, if you live out of town, we will send it to you, with instructions as to how you may make your examination papers complete. We will fix the day for examination that is convenient for both of us. These examinations may be taken in the morning between half-past nine and eleven o'clock in this building.

From the Surgeon General's office, and from those of us who represent the Medical Reserve Corps examining forces, the message goes out that we need you now. Five thousand medical officers are called for, and the State of Louisiana is expected to furnish nearly 200 more than she has already supplied, and she has supplied already over 300. The message should be taken back by those of you who go to the smaller country places. The bulletins sent out by the Medical Section are sometimes read, sometimes not. The message should go out that the Medical Reserve Corps needs reinforcements. The army has estimated that for every 1,000 recruits there should be ten medical officers, and of these, seven should be of the Reserve Corps. The regular Army Corps has now about 700 officers, with many vacancies to make up the 2,000 personnel. The

Medical Reserve Corps now has in actually commissioned officers over 22,000, and in the service over 14,000. If we are to have a Medical Reserve Corps, it should be a real Reserve Corps. In other words, if the medical profession is to constitute itself a Reserve Corps for service, there should be at least one man at home ready for service for every one who goes into active service. If we have now 22,000 men, we should have twice that number available. There will be, at the end of this year, 2,000,000 soldiers; there should be 20,000 doctors. If 20,000 doctors are needed, it will take most of the Reserve Corps now commissioned. If we need 2,000,000 men more before another year, it will need 20,000 doctors more, who should be in training, ready for service, but who may go on with their usual professional work at home until they are called.

The time has passed when there should be much distinction between medical services of the government. I heard and read with interest and pleasure the address delivered in Memphis, before the Southern Medical Association, by Col. Noble, Executive Officer of the Surgeon General's office, in which he made the remark that this war has put the burden of the Medical Department of the Army upon the profession of the United States. That statement means a great deal. A little body of men, of some 700, in the Regular Army, is now a part of the medical service in which there are more than 20,000 men of the Medical Reserve Corps. Those 700 men, so far as they could, have devoted a large amount of their time to the training of the Medical Reserve Corps to make them efficient medical officers. If any one has the privilege of visiting the training camps to see what kind of men are made of the ordinary doctor, who usually follows the routine of every-day life, adjusting his own engagements, keeping them as he pleases, who is forced into the military regime, where he eats and drills and goes to school at regular hours, it is an inspiration. All that is comprised in the text which has been given me to-night.

I have been asked to present a message to you, and do it in as strong terms as I possibly can. Medical men who answer the call of their conscience, who have not yet come into the Medical Reserve Corps, should do so now, and not wait until somebody goes after them with a pressing invitation.

When at the beginning, nearly a year ago, it was agitated that conscription should be made a provision in order to swell the Medical Reserve Corps to the proper proportions, your Medical

Section went on record, in representing the policy of this State, that conscription in Louisiana was not necessary. I believe that the call which has been made to the profession has been well answered. Up to the present time we have gotten 14 per cent of the profession of this State. Many members of the medical profession of this State have come in voluntarily, and I am optimistic enough to believe that the additional quota required from Louisiana can be readily accomplished.

THE MEDICAL PROFESSION AND THE GREAT WAR.*

By COL. HENRY PAGE, M. C.,
Commanding Officer, Medical Officers' Training Camp, Camp Greenleaf, Fort Oglethorpe, Ga.

In this great city, where the traditions of glorious France and her sister, America, are united, one need not speak of liberty, nor is it necessary to stimulate a patriotic flame that already burns so fiercely.

For six months it has been my good fortune to have your Tulane Unit, Base Hospital 24, under my command at Camp Greenleaf, and it was from this privileged association, with splendid, noble fellows, that I learned much of New Orleans, and had born within me a desire to see this queen of cities which can send forth to war such men. I am, therefore, happy to be with you, and to profit by my association with you.

My address to-night is upon the medical profession and the great war. It is intended to be an inventory, or stock-taking of the assets and liabilities of the medical profession, so that we may, all of us, better balance the ledger of our lives and know where, as a profession, we stand.

In a brief address it is not possible to deal with statistics, and I shall not attempt to do so. On the other hand, I do not wish to generalize too broadly, and I do not think I am doing so when I express the belief that at this moment Germany would be master of the world had not American food, ammunition and doctors been sent to aid the Allies.

Comparison of vital necessities are futile, and one cannot state that of all the gifts we made to the Allies the gift of our doctors is the most valuable, but we can say that up to the beginning of 1918

* Read at the 39th Annual Meeting, Louisiana State Medical Society, New Orleans, April 16, 17, 18, 1918.

the value of America's contribution of man-power was 95 per cent medical.

In the months to come, American fighting troops in France will be vastly increased, but the value of the doctor will be only relatively diminished. Like the battle plane and the 16-inch cannon, the doctor is a necessity, and the country that fails to provide its army with necessities shall perish. This fact has at last begun to be realized in America, but we are almost criminally slow in recognizing the fact that the trained doctor—the doctor trained along military lines—is a necessity. Some of you even yet fail to understand that unless we give our doctors military training we will certainly lose this war.

Fortunately for my argument, I have facts to present that will prevent you from laughing at this statement and utterly repudiating the proposition which, prior to 1914, I so many times advanced with humiliating consequences. The *British Medical Journal*, quoting figures of the French Statistical Bureau (M. Bertillion in charge), and from such German sources of information as were obtainable, states that in August, 1914, the Germans were sending back to the firing line about 90 per cent of the wounded that reached hospitals. Now, if salvage of the wounded is a purely medical proposition, the French, English and American doctors should have been returning to the firing line about 90⅔ per cent of their wounded, because you will agree with me that English, French and American doctors are vastly better surgeons than are the German surgeons. I cannot tell you what the Ally statistics on this subject were in August, 1914, but in November of that year, when railroads were built to connect the firing lines with all the hospitals in France and England, when America had sent its Criles, Brewers and Hartes to give them aid, and when every condition conspired to give the doctor his opportunity to make a brilliant record, the French and English returned to their front only 23 per cent of those who had reached their hospitals. In April, 1915, this figure had jumped to 65 per cent, and it has been only within a short period that our Allies have nearly approached the excellent record that has given Germany a very decided advantage expressed in terms of companies, battalions and divisions.

We can, therefore, count ignorance of the fact that a military surgeon must be a soldier, as our first great liability; but, on the opposite side of the ledger, you can enter Camp Greenleaf as an asset to military medicine, which makes the balance no longer

formidable. At this camp the knowledge has taken root that even the ward surgeon in a base hospital must receive a military training; that, unless the least military of our organizations are manned by soldiers, we shall fail to get the team-work that results in efficiency. To paraphrase Lincoln's famous epigram, "You cannot have an army half military and half civilian," and my message to all of you is that to serve in any capacity in the army at 100 per cent efficiency you must have military training.

The second liability of the medical profession has been expressed in terms of personal losses and the disruption of medical schools. The former we can dismiss in a few words. We are all in the market to buy happiness—physical happiness, which is short-lived and largely imaginary after the bread-line has been passed; and contentment, which comes of knowledge of duty well done, which is real and permanent. Like any other commodity, happiness must be paid for to be appreciated. The boy who works and saves his pennies gets more happiness out of his Ingersoll than the rich boy gets out of his $100 gold watch; and for the same reason what you get out of this war will be exactly what you put into it. It is a glorious chance to make a good bargain, to purchase happiness cheaply, and I hope every doctor in America will be pinched with sacrifices, and more sacrifices, until he has laid up treasures that all of the gold of Crœsus could not buy. The liabilities in this war will rest only with that rare bird of our profession who seeks in this hour to feather his nest. "What profiteth a man to gain the whole world if he loseth his own soul?" The medical pirate will not only lose his own soul, his only chance for everlasting happiness, but he will lose the world as well; for, with all the assurance of positive conviction, I tell you that the men who sacrifice self in this war shall be the owners of the earth and all that it contains.

The disruption of medical schools, at first sight, looks serious, but the legislation now in force will preserve the output that will be necessary to supply wastage in the army if the war continues for several years. Temporarily the civilian population will not be served as well as in times of peace, but this will be more than compensated for by the fact that if this war lasts long enough the medical profession will be of so much higher quality that the temporary hardships will soon be forgotten.

Our Assets in This War.

This brings us to the end of our recital of liabilities, which are in fact simply assets in disguise. Of our apparent assets we have

too long a list to mention them all, but we can emphasize first the fact that our profession is the great volunteer profession of America. It was the first to have a Reserve Corps, it filled up this Reserve Corps without the pressure of the draft, and it is the most efficient part of the United States Army. It promises to remain the most efficient. With less to gain, with more to lose, with less thought of self and with more regard for duty than any other profession, this profession of ours has heard the call and it has responded. Is this our asset for the profession? I should say that for all time we have gained happiness and honor.

The second great visible asset is the good, just referred to, that will come to all who serve. I mean the professional advancement. You do not yet realize that the Army Medical Service is a vast training school, where opportunity to become skilled in medicine knocks at the door of every doctor. To many young men this is the only chance they have ever had; to all others it is the best chance they have ever had to learn their art. While this is true in every part of the army, it is chiefly true of Camp Greenleaf, where not only military art, but medical art as well, claims the best efforts of the best teachers the country can afford. I refer to the Camp Greenleaf schools.

It was my good fortune to start these schools at the camp—schools of hygiene, internal medicine, surgery, orthopedics, laboratory and X-ray schools—and it has been a revelation to me to see what can be accomplished under intensive study conditions now in operation. What the future of these schools shall be is now in other hands, but it is safe to say that the plan shall not fail, and all of us must use our best efforts to see that such a force for good shall receive our backing and our most loyal support. The plan contemplates a great medical university at Camp Greenleaf—a unique institution that shall serve during and after the war to give the best post-graduate courses the world has ever known to an unlimited number of our profession. Is this an asset? The most confirmed pessimist must shout for joy when these facts become known.

But all of these assets are but minor matters compared to the great idea which is the logical sequence of all of these happenings. Need I show you the goal toward which we tend?

Let us approach the idea from another angle: The medical profession is the most learned of all professions, and yet in the councils of the nation it has no force—nay, it has barely a hearing. Labor is

presumably the least learned of all classes, and yet it has a cabinet minister and is the mightiest force of the nation—yes, even more mighty than capital.

Why this difference? The answer is not that labor combines criminally to force its wishes upon the rest of the world, while medicine, in altruistic lethargy, is willing to let others work their will. The true answer is that labor is exercising the sovereignty vested in it when we abolished thrones from our midst, while medicine has shirked its obligations and has allowed its sovereignty to go by default. A doctor once said to me that he deemed it a strange thing that a cabinet minister existed to see that hogs did not catch cholera, while the diseases of mankind were handled by a subordinate bureau. I asked him if he had voted at the last election, if he belonged to the A. M. A., if he was an advocate of a National Board of Medical Examiners, and to each question he answered "No." I told him to go his way and to marvel not henceforth.

In a democracy, sovereignty is vested in the individual. Each individual, according to his brains and his personality, is the center of a sphere of influence. The sphere is large when the individual, by study and industry, makes it large, and it is small when he is ignorant and non-social. As the government supplies education, it likewise demands service in return. Each educated man, therefore, has an added responsibility thrust upon him to maintain—*i. e.*, he not only has his individual obligation to exercise sovereignty, but also he assumes an obligation to exercise an influence upon others in their individual exercise of sovereign rights. In other words, sovereignty is vested in every man, but democracy depends upon the educated man to guide those who look to him for precept and example.

With groups, as with individuals, democracy likewise demands the assumption of sovereign acts. Groups are collections of specialized individuals, and thus it is that unless medicine unites to demand statutes that it in its wisdom deems necessary for the public good it is in the position of a cabinet minister that sits silent and draws his pay without rendering a *quid pro quo*. Democracy in America will be a farce unless the profession of medicine and all other classes unite, as labor has rightly and democratically done, in the exercise of their sovereignty. In a democracy, the guardian of the public health is the medical profession, and if the medical profession has no representative to speak for it, or if it does not speak for itself, it is but right and proper that special laws relating to the public health, and even to the profession itself, should be made by

other classes who have exercised their sovereignty and have earned the right to speak for those that have not.

If all classes did as medicine has done, democracy would be dead and imperialism would triumph. If all do as labor has done, democracy will triumph, and all kings will perish from the face of the earth.

We can now answer our question and cry aloud that, actuated by the sight of the horrible crimes of imperialism, united in service as we could never before unite upon any common ground, we, the profession of medicine in America, have found ourselves, have found a new meaning in the word LIBERTY, are at last about to take up our sovereign rights to serve America and humanity.

Gentlemen, I believe that the big asset of this war is that medicine shall unite, and thus convert its potentiality for good into a reality, and I believe it is through the Medical Reserve Corps and the Volunteer Service Corps that this shall be accomplished. Our motto will be "I serve," and, as our opportunity to serve is infinite, so will our results be infinite. Being the greatest learned profession, we ought to have the greatest influence in America. Being the great humane profession, this influence should be the best influence in America. I ask you to take these ideas home with you and ponder deeply upon them. If we earnestly desire to do this great work we must make the Regular Medical Corps, the Reserve Corps and the profession at large one and the same thing. All who are eligible must join the Reserve and place themselves in the hands of the Medical Department; and this medical profession, united on the one common ground of "service," will then enjoy its birthright.

Optimist that I am, I therefore see no liabilities. Assets we have in plenty, and let us see to it that we shall not hide our talents in a napkin.

MEDICAL RESERVE CORPS AND MEDICAL MILITARY ACTIVITIES.*

By MAJOR FRANK SIMPSON, M. R. C.,
Chief Medical Section, Council of National Defense, Washington, D. C.

Mr. President, Ladies and Gentlemen:

My message is brief. I call upon all who hear it to carry it to the remotest corner of this State. At present Louisiana has contributed liberally to the service of the nation in its medical activity. Existing conditions require that in the next few weeks this State

* Read at the 39th Annual Meeting, Louisiana State Medical Society, New Orleans, April 16, 17, 18, 1918.

must make another liberal contribution—about 175 medical officers to the army and about twenty-five to the navy.

You have followed current events with the keenest of interest. You know of the shameless deception of the Germans in trying to destroy the morale of the Italian Army. You know of the repeated rumors of peace, designed for the purpose of preventing the speedy transformation of this nation, and especially of its industries, from a peace to a war footing. You know of the rumors of dissension in the German Army, of mutiny in her navy, of starvation riots and of dissension among her people, all circulated for the express purpose of causing us to underestimate the strength of the enemy. The lie has been given to those rumors by the hordes of Huns that have been thrown against the Western front. You have seen the masterful effort that is being made by our war-weary Allies; you have heard and have not doubted the words of Premier Lloyd George, of England. It is impossible to exaggerate the importance of getting reinforcements from across the Atlantic in the shortest possible space of time. Your hearts have been gladdened by the statement that the President himself gave orders to the effect that all else must be subordinated to the one task of getting American soldiers to France. With bated breath we are now watching the wavering lines in France. Your hearts are filled with admiration and with gratitude for those brave men who for four years have checked the mad onrush of the Huns; but many of us have not realized our full significance or individual responsibility in this crisis until the terrible drive now in progress forced from the lips of Sir Douglas Haig that tragic appeal:

"Words fail me to express the admiration which I feel for the splendid assistance offered by all countries to our army in the midst of these trying circumstances. Many of us now are tired after four years. To those I would say that victory will belong to the side which holds out the longest. The French Army is moving rapidly and in great force to our support. Again, with our backs to the wall and believing in the justice of our cause, each one of us must fight to the end. The safety of our homes and the freedom of mankind depend alike upon the conduct of each one of us at this critical moment."

What does that mean to the medical profession of Louisiana? It means that if you do your part in this terrible crisis your State will in the next few weeks send 200 additional officers

to the army and to the navy of the nation—175 to the army and twenty-five to the navy. You naturally ask, what is to be done with so many doctors? You recall that a few months ago, before a committee of the Senate, the Secretary of War made the statement that before the close of this year 1,500,000 would be in Europe. Prudence of the most primitive type dictates that in this crisis for every soldier that is sent to the front at least one, certainly two, probably three or more men must enter training if we are to have adequate protection for this nation. Who among you can bring himself to believe that this great nation, in the greatest struggle of the world's history, could be so short-sighted as to make such meager protection? and yet that means, if we replace one soldier by a new recruit, three million under arms before the first of next January. The lowest possible estimate of medical men requires 7,000 doctors to a million of men, so that it would mean 21,000 doctors for our army. Of the 22,000 who have volunteered, there are available to-day approximately 18,000, net deficit of 3,000 existing at this time. But that is not all. Our Allies need medical officers. We must come to their support. That is not all. In order to be sure that we may find the right man for all emergencies, and put him in the right place at the right time, it is essential that the Surgeon General should have a good margin, a good surplus, from which to select those men. It is just as necessary for the Medical Department of an army to have a reserve surplus as it is for a bank to have a surplus of dollars. You all know what would happen to the banks of New Orleans if at the close of business to-morrow the cash reserve were perilously low or if the vaults were empty. The Surgeon General's vaults of precious men must never be empty. The Surgeon General has called for 5,000 men to meet immediate needs. It is clear to men of vision that, before the close of this year, we must have at least 10,000 more doctors. The navy to-day needs 1,000. Your task is, therefore, to help us raise that number within the next few months. So you see, you have a real task, one that is to tax your ingenuity—the strength of not one member of the medical profession, not of two members, but of all loyal, patriotic men, and to that kind of men I know I am now speaking.

In closing, I would ask that each one of you take this brief message to heart, always remembering that when in the future your wives, your children, your friends, your neighbors, your patients ask what part you have played in this great crisis of the world, the

accusing conscience will always place the burden of responsibility upon the man who stays at home. I feel very sure that this State will do what it has always done—meet its full responsibility, and that within a brief period we shall have the full quota from Louisiana. (Applause.)

THE BASS-WATKINS AGGLUTINATION TEST FOR TYPHOID.*

By FOSTER M. JOHNS, M. D.,
Assistant Professor, Laboratory of Clinical Medicine, Tulane University, New Orleans, La.

In an article entitled "A Quick Macroscopic Typhoid Agglutination Test," by Drs. C. C. Bass and John A. Watkins, in the *Archives of Internal Medicine* for September, 1910, an agglutination test for typhoid was brought forward as a practical method of securing the information furnished by the classical Widal reaction, a test that requires a knowledge and the equipment of a laboratory.

This reaction was simply a development of the observation that, within certain wide limits, the more concentrated the suspension of bacteria, the more rapidly agglutination takes place in the presence of a given amount of agglutinin. In the finished test not only was the time factor greatly reduced, but with the heavy suspensions of bacteria used the resulting agglutination was rendered easily visible to the naked eye, which at once obviated the microscope and considerably improved upon the more or less dilute contemporaneous macroscopic tests then in use, which, in addition, required many hours in their performance.

In the eight years that have elapsed since the publication of this article this reaction has constantly grown in favor among the clinicians of the South, in spite of many improper lots of reagent supplied by private laboratories, my own included, as well as the various biological houses. During this time the test has been in constant use in the laboratories of clinical medicine with which I am connected, and it is with the belief that this reaction offers an easier, quicker and even more accurate reaction to not only the clinicians, but the trained laboratory worker as well, that I have prepared this discussion of a now well-known test. During this

* Read at the 39th Annual Meeting, Louisiana State Medical Society, New Orleans, April 16, 17, 18, 1918.

time the few faults in technic and production brought out by continual use have been met and overcome, with the exception of a technic that will insure the uniform production of a stock suspension of typhoid bacilli that will keep well under the ordinary conditions of usage. With the aid and coöperation of Dr. Bass, I have been able to evolve a formula that has answered every requirement for over a year, and I will take this opportunity to briefly outline the reason and manner of the change in method of preparing the stock Bass-Watkins suspension.

As described in detail in the original article, the technic is designed to meet the exact requirements of the classical Widal in a serum dilution of 1 to 100, with the exception that the organisms are definitely spaced to where they are immediately sensitive to the collective forces of surface tension, when these are initiated by the addition of the agglutinating serum instead of depending on the many varied factors of motility, reaction, strain and concentration of the broth culture in the classical test.

That the reaction is founded on correct principles and, when properly performed, will check to the last detail with the classical test when it is properly performed, is a definitely established fact and needs no further attention here, beyond the statement that in student and private work in our laboratories are the records of now many thousands of parallel reactions using both the Bass-Watkins and the original Widal methods.

The material required in the test are a few microscope slides, blood sticker, medicine dropper, toothpick and a stock of suspension of typhoid bacilli, this latter consisting of 10,000 million typhoid bacilli per c. c. in 1.7 per cent salt solution and preserved with 1 per cent formalin.

In making the reaction we add one drop of water to a smear consisting of one-quarter drop of blood; dissolve the blood by stirring with a match or toothpick. Add one drop of Bass-Watkins suspension and then gently agitate the slide for one minute, watching for the appearance of a meal-like sediment of agglutinated organisms in the positive reaction. In the case of a negative reaction the suspension on the slide remains uniformly turbid.

As simple as the technic sounds, there is often considerable difficulty in doing a simple thing. Taking up the test step by step, I will endeavor to point out the places where error may creep in. To begin with, an absolutely clean slide, freshly washed with soap and water to remove the grease and dust, must be used. Now, we

require one-quarter of a drop of blood on the center of the slide. This is a quantity almost impossible to describe to one not accustomed to the routine making of proper blood smears, but practically it is easily approximated. Squeeze a quantity of blood out of a puncture on the finger or ear lobe that will not quite drop off, and then barely touch the slide to it. The quantity adhering to the slide will vary from one-quarter up to one-half of one drop. In either instance, for practical purposes, the end result will not be influenced, as it is commonly estimated that in the presence of the usual positive Widal there are several hundred more units of agglutinin present than is needed in the actual agglutination of the organisms. The actual dilution of the organisms will not be disturbed by either of the quantities of blood, as the blood is then spread roughly over the middle third of the slide and allowed to dry.

Now, one drop of plain water is added. Drops can vary enormously in size, and while, if the proportions in the test were carried out to suit, no harm would ensue, still, for working purposes, we need a full-sized drop. In this instance the standard drop is measured by preferably using the ordinary medicine dropper held almost parallel to the table, so that the drop collects on the side of the elongated glass tip of the dropper.

In dissolving the blood the water should be carefully spread, taking care not to scrape up the blood-cell stroma that will adhere to the slide if the specimen is over a few hours old.

Now, shake the bottle of suspension well and add one full-size drop of suspension to the diluted blood. The slide is now slowly tilted (so as not to break up the clumps as they form) backward and forward and from side to side for a few seconds to thoroughly mix the suspension and water on the slide, and then is viewed by indirect light—*i. e.,* toward the window, with the window sill or crown as the background. Continue rocking the slide and observe the gradual formation of the small white granules of agglutinated bacilli as they now begin to form. The earliest agglutination is seen around the edge of the dilution, and are seen best as they are gathered up on an advancing wave as the angle of the slide is varied. Agglutination is always complete in one minute, and no attention should be paid to the formation of clumps after drying of the edges has begun, as this is simple conglomeration and not specific agglutination. Varying degrees of agglutination will be noted—depending on the concentration of agglutinin in the blood of the patient. The formation and collection of these protective substances in the

blood only begins with the onset of symptoms in the patient—and is only present in demonstrable quantities in the usual case by the end of the second week. A negative reaction counts for very little early in the case, but gradually assumes importance as the days pass. Weakly positive (or doubtful negative) reactions should be repeated from day to day. A positive reaction must be interpreted in the light of the present symptoms, discounting the history of antityphoid vaccination or previous typhoid. The agglutinins are usually lost several months after an attack of typhoid (or vaccination), but may persist in a few individuals for many years.

Make it a fixed rule to make a known negative control reaction at the time each test is made. This is a requisite in all laboratory reactions, and is the only way an error in technic or suspension can be kept constantly checked up.

As mentioned previously, in the past we have occasionally noted a variation in the keeping quality of the suspension prepared as closely to the original formula as possible. Many of the suspensions on the market, as prepared by the various biological houses, were found to have deteriorated. Some vials react perfectly, after now eight years of preservation, while other would not keep more than several weeks. All of the suspensions made up in our laboratory, when not reacting properly, always gave the error on the positive side of the reaction. In other words, non-specific positive agglutination. It has long been known that suspensions of bacteria would be agglutinated by acids or alkalies, and that this action was exerted in varying degree on different strains of the same variety of organisms. Indeed, strains of typhoid bacilli may be found, or even produced, that do not yield specific agglutinations as well as others, such as the famous Russell strain for vaccine use, that agglutinates to a considerable extent non-specifically with the sera of many normal individuals.

After considerable experimentation, which embraced the organism, culture media, diluent and preservative, I have found that a suspension that is made up practically neutral in reaction will keep perfectly. This includes the elimination of the sodium chloride, which becomes dissociated in solution, and even though present in minute quantities, exerts a deleterious effect on some strains of organisms when acting over a long period of time.

Briefly, a fairly recent strain of B. typhosus suitable for Widal purposes, and that gives a good heavy growth, is selected. This is

inoculated by broth cultures on to Roux flasks containing a surface of ordinary laboratory agar-agar, with the sole requirement that it be fairly dry. After several minutes the broth is poured off, the flasks inverted and incubated for forty-eight to seventy-two hours at 37° C. The organisms are then washed off with a minimum of 1 per cent formalin (Merck) in water.

The washings containing the organisms are then poured through a thin layer of cotton to separate any course sediment, and are then placed in large, wide jars, not over six inches deep. (Small quantities may be centrifuged.) In about a week the organisms have settled to a layer approximately one inch deep—the supernatant fluid is then carefully decanted, the bacterial sediment counted, and made up of 10,000 million per c. c. with 1 per cent formalin.

This amounts to the preparation of washed typhoid bacilli in 1 per cent formalin. The absence of the salt in no way has interfered with the proper reacting of the organisms, whereas 17 per cent sodium chloride will cause the iso-agglutination of many strains of typhoid bacilli.

Discussion on the Paper of Dr. Johns.

Dr. C. W. Duval, New Orleans: One great advantage I have seen in the agglutination reaction for typhoid is that they use killed cultures. This prevents any possible chance of the operator or the physician who is using the test from getting the typhoid organism. In the old or original test, which was both macroscopic and microscopic, living typhoid organisms were used. I think the dead organism which we are now making and using is quite as well as the living organism and has a decided advantage because of that fact. There is no possible chance of contaminating one's self with the organism.

I would like to ask Dr. Johns if he has tried using tricresol or some carbolic preparations for the keeping of the stock or dead organisms which become contaminated with other organisms? I should think tricresol, 1 per cent, might keep down contamination and at the same time not interfere with the antigenic or agglutinating property of the dead typhoid organism.

Dr. R. B. Wallace, Alexandria: I have been using this test since it was first brought out. It has appealed to me on account of its practicability and simplicity. It can be carried to the patient's bedside. It is a very small, little box, and contains a complete equipment, and for that reason I think it is meritorious, in addition to its tallying practically with the original Widal. I want to bring that little point out as one reason why any physician who has learned how to use it can put it into active practice.

Dr. O. O. Hamner, Bienville: I wish to thank Dr. Johns for his paper on this subject. Like Dr. Wallace, I have been using this test since it was first gotten out by Dr. Bass. Dr. Bass sent me specimens of his

solution, and I have used it many times, and it is a great help in diagnosing cases of typhoid fever.

I wish to express my thanks, and believe it is a very simple and practical method by which we can get at the true nature of the disease.

Dr. Frank H. Walke, Shreveport: I would like to ask Dr. Johns what part the paratyphoid stain played in this particular test? I might say, in listening to Dr. Johns' paper, the test has appealed to me on account of its simplicity, and also on account of the fact there is much less of the culture of typhoid on hand, transferring the live cultures, and the method appeals to me very much. I would like to know, however, what part the paratyphoid stain has played in this particular test.

Dr. Foster M. Johns, New Orleans (closing): In line with what Dr. Duval has said, I will say that six or eight months ago a ruling came out from the War Department requesting each laboratory to keep cultures under lock and key. The demand for the Bass-Watkins test has been so great that the laboratories have been swamped to fill the orders. We have not been able to keep up the cultures. The test fills a want during war-time.

As regards tricresol as a preservative, we have not tried it, for the simple reason that formalin has answered all purposes, and, as the blood is kept in this bottle and allowed to stay, it can be kept perfectly for any length of time. It is a question of how well the bottle is stoppered and how to keep from contaminating the growth. If the stopper is left out, there is evaporation, and the contamination destroys and autolyses the organism.

We have not tried tricresol. It is much better in vaccine work than anything else, and possibly it would be worth while.

I think Dr. Hamner has the right idea, only I believe in the last few years the Widal or any of the agglutination tests are simply confirmatory reactions—they are not diagnostic. Typhoid fever should be diagnosed within the first three or four days with a blood count. That is scientific medicine, and we can practice scientific medicine. The next thing is to rule out malaria with a low leukocyte count and call it typhoid fever. Along about the third week you get anxious and want a confirmatory test, and that is the time when the Widal or the Bass-Watkins test can be used.

As regards paratyphoid cultures, they constitute organisms whose pathogenicity varies from the typhoid bacilli on down to an enteritis or organisms of the colon group. We isolate and keep on tap two different strains—one paratyphoid A and another paratyphoid B—and the agglutination is specific for paratyphoid A and B types. My experience with paratyphoid is that it constitutes less than 3 or 4 per cent of the cases, and for practical purposes I keep a suspension of paratyphoid A and paratyphoid B for my own use, so that we rule out typhoid, and that is sufficient.

TREATMENT OF ECLAMPSIA.*

By HILLIARD E. MILLER, M. D., New Orleans, La.

There have been few problems in the medical category which have caused as much speculation and been the stimulus for a more earnest campaign of research than the toxemias of pregnancy, or the so-called preëclamptic state. Yet, from the time of Hippocrates, all of the theorizing, laboratory and experimental data have amounted to practically *nil,* so far as elucidating the underlying factors of causation or furnishing any clue as to what would be the most promising method of treatment to be adopted.

As a result of confusing and conflicting statistical reports from the various large maternity hospitals, there has naturally been a division of thought among members of the profession, which division has evolved two opposing factions, namely: the advocates of radical treatment and those who still claim good results from palliative measures. The advocates of each method have waged a campaign pro and con, with no other results than that at the cessation of hostilities each one was still impassioned with his own prejudiced ideas and unable to see any reason why they should be different.

One will see from the beginning that he must ally himself either with the radicals or conservatives, for there can be no individualization of cases, nor is there any particular feature in a given case which will designate whether the uterus is to be hurriedly emptied or whether one can afford to procrastinate with symptomatic treatment and allow nature to free the mother of this vicious poison.

Whatever method we choose, it must be directed toward conserving the vitality of the mother in eliminating, as far as possible, the development of shock. The child should not incur a great deal of consideration, as many of them are as much as a month or month and a half premature, and live only a few hours after delivery. Some die during the initial convulsion, while only a few survive the storm, and a large percentage of them succumb during the first few days as a result of trauma sustained through the method of delivery, or from remote effects of the profound toxemia.

The essential factor, and the one which offers the most effective means of dealing with this dreaded condition, is the early recognition and proper interpretation of the initial symptoms and the institution of a vigorous treatment to abort the dire consequences which

* Read at the 39th Annual Meeting, Louisiana State Medical Society, New Orleans, April 16, 17, 18, 1918.

result through neglect. The fully developed case of eclampsia is either due to gross negligence or ignorance on the part of the attending obstetrician, or else a failure of the patient to appreciate the significance of signs and symptoms which her doctor has warned her of as portending trouble.

The history of all preëclamptics is essentially the same, namely: headaches, spots before the eyes, epigastric pain, muscular twitchings, occasional slight mental unbalance, dizziness, ringing in the ears, etc., also a rise in blood pressure from 140 to 250 m. m., finding of albumen and hyaline and granular casts, low urea percentage and diminished output. These prodromata may be present from a few days to four or five weeks before the actual occurrence of convulsions, and all serve to point to a kidney or liver involvement of varying intensity. Of all the signs of impending trouble, the blood pressure recordings are probably the most reliable and constant, for many cases develop convulsions where the urinary findings have been repeatedly negative even for a few hours prior to onset of attack.

These symptoms should be seriously heeded, and at once a vigorous eliminative treatment instituted as a prophylaxis. This, however, is only empyric, since we do not know the real causal factors; yet in a large percentage of cases the symptoms subside and the patient goes to full term without a great deal of discomfort.

The object of the eliminative treatment is to relieve as far as possible the extra burden thrown on the kidneys, and consists of hot packs every twelve hours, colon irrigations, three to four gallons of a 2 per cent sodium bicarbonate and glucose solution every eight hours. The diet should be limited to milk entirely, two to four quarts daily.

If the patient is restless and irritable, morphia, gr. ¼, to be repeated as often as is necessary, or chloral, gr. 30, sodium bromide, gr. 40, by bowel, will usually quiet the patient and procure a few hours' restful sleep.

The old practice of bleeding to lower blood pressure is, I believe, a pernicious one, and should be practiced only in cases developing postpartum convulsions. A few minutes after a sufficient quantity of blood is withdrawn to lower the blood pressure appreciably, conditions may arise necessitating a rapid emptying of the uterus, with a consequent loss of a great deal of blood; the two combined may be quite enough to precipitate a pronounced state of shock or immediate death.

If the eliminative form of treatment is to be effective, improvement will manifest itself within the first forty-eight or seventy-two hours by an abatement in symptoms, rise in urea percentage, lowering of blood pressure, etc.

Should these symptoms persist over a period of four or five days, however, we have trusted the palilative measures as far as we should dare, and immediate measures should be made to evacuate the uterus as rapidly as possible.

Many authorities, however, continue to treat the patient symptomatically, even after convulsions appear, attempting to abate and lessen the immediate and remote effects of the convulsive seizures with large doses of morphia. The morphia, to be effective, must be given in very large and oft-repeated doses—enough, according to its advocates, to bring the respirations down to eight or ten per minute. This, to my mind, is not only adding an extra toxin, but borders on to fatal morphin poisoning.

We know only one thing certain about eclampsia, and that is that only the products of conception are capable of producing such a state of toxemia, hence it would seem logical to remove this cause by the quickest possible route as soon as conditions arise which place the mother's life in jeopardy. The mode of rapid delivery, however, depends on several conditions—first, the period of pregnancy; second, the state of the cervix; third, complications, as contracted pelvis, placenta previa, etc.

As to the first mentioned, if the convulsions appear before viability of the child is established, it is only necessary to procure sufficient dilatation of cervix to do craniotomy and extraction.

If the cervix is fully dilated, and the head is engaged, apply forceps and deliver. If the head is still floating above the brim, version and breech extraction is the best maneuver. If the cervix is only partially effaced, manual dilatation with fingers or Dührssen's incisions, followed by forceps delivery or version, depending on conditions aforementioned.

If the cervix is large and hard, with no dilation, and the pelvis is of such dimensions as to allow of delivery, vaginal Cesarean section is best. If there should be a contracted pelvis, or a placenta previa complicating the picture, abdominal Cesarean section is the method of choice.

Fortunately, with the onset of convulsions, labor usually begins, and in a small percentage of cases the severe convulsive seizures rapidly dilate and efface the cervix and effect a precipitate labor.

Ether is to be the choice of an anesthetic, but as little as is possible is to be given.

The post-partial care of these patients demands as much consideration as any stage of the treatment, as it is not uncommon for them to be so saturated with the offending toxin as to develop eclampsia after the uterus is emptied. Hence, the same drastic eliminative methods outlined before should be carried out until the symptoms subside, blood pressure drops and urine is negative for albumen.

It is the duty also of the obstetrician to ascertain subsequently the amount of damage done to the kidneys and to advise strongly against any future pregnancy in case a true state of chronic nephritis exists.

Discussion on the Paper of Dr. Miller.

Dr. T. B. Sellers, New Orleans: I have listened to the careful and instructive paper on eclampsia, which is a subject of vital importance to every practitioner. The point we are most interested in is prevention.

I had the privilege three years ago of serving on Dr. Allan Eustis' staff, who is a strong believer in not only testing the urine for albumen and sugar, but also for indican and urobilinogen. I feel that if you find indican and urobilinogen, as he stated yesterday in his paper, in the urine, it is an index that the liver is not functioning. We know that the primary cause of eclampsia is a central necrosis of the liver, and the albuminuria is only a secondary manifestation late in the development of the disease. If this is true, and it is needless to say that I believe in it, thanks to Dr. Eustis for impressing this on me, we have to solve the great problem in preventing eclampsia. In my limited experience we cannot foretell the outcome of eclampsia, and it is well to put these cases on a strict carbohydrate diet, forced liquids, purgation, and so on. In many of these cases the eclampsia comes on like a bolt out of a clear sky, with convulsion as a first instance. Another class of cases are those that come on with albuminuria several days ahead. You test the urine and find albuminuria. Those cases you put on a carbohydrate diet. In those cases that come to us like a bolt out of a clear sky, if we can obviate the development of the convulsions it is a point worthy of consideration.

As to the mode of delivery, I feel that depends a great deal upon the locality. If you are in the country, Cesarean section is almost impossible. If you are in a city, where you have the advantage of hospitals and nurses, no doubt the surgeon prefers to do Cesarean section, the vaginal route being preferable in cases where the pelvic measurements will permit; but you have another class of cases in the country in which it is almost impossible to do anything but delivery in the natural way. In those cases where you are handicapped, obstetricians throughout the East, most of them, are heartily in favor of large doses of morphia and of resorting to conservative treatment almost exclusively. While I was in the East I found most of them recommending conservative treatment. When a case began to do badly, they took the woman and delivered her and used morphia in combination.

Another point is this: There are a large number of cases of eclampsia that come into the hospitals just after a large meal, and the thing we do not want to forget is to eliminate the meal from the stomach as quickly as possible and get in our diuretics and purgation and so on.

Dr. P. B. Salatich, New Orleans: Eclampsia can come on as early as the third month (Zweifel), but it is generally met with during the second half of pregnancy, and most frequently nearer the end. It occurs about once in one hundred pregnancies. It occurs about 55 per cent during the later months of pregnancy, 30 per cent during labor and least frequently after delivery, about 15 per cent.

Convulsions may come on without symptoms, but usually the following symptoms are noted: vertigo, persistent headache, precordial distress, epigastric pains, disturbed vision or total blindness; sometimes only spots before the eyes, and general edema.

Systematic examination of the urine not only for albumin and casts, but also for urea, and the amount of urine passed in twenty-four hours, and the total amount of urea. This is more important than casts or albumin, for they may be present or absent. High blood pressure persisting, should always be regarded as a dangerous sign.

The treatment may be considered under three heads: 1, Prophylactic; 2, medicinal, and (3) surgical.

1. Prophylactic.—The preventive measures during pregnancy are of paramount importance. Strict attention must be given to the various hygienic measures, such as the free use of water. Every pregnant woman should be watched by a physician or, if unable, at a hospital dispensary. They should bathe regularly in tepid water. Regular exercise in the open air, preferably walking and riding. The diet should be principally fruit and vegetables, with restriction of the nitrogenous food, especially during the later months. Take especially milk if albumin appears in the urine. Laxative mineral water should be taken to keep the bowels regulated. Be sure to make the total estimation of urea in a twenty-four-hour specimen. Alkaline drinks, such as sodium bicarbonate in hyperacidity, are very beneficial.

2.—Medicinal.—Large amounts of water and the intravenous injection of normal saline are highly recommended. Venesection and the introduction of saline into the skin can be used not only in the plethoric, but also in weak patients. The salt solution is quickly absorbed and takes the place of the blood removed. If venesection is performed before the child is delivered the saline should be introduced simultaneously, or the slowing of the circulation of the uterine sinuses will kill the fetus. When the convulsions come on, calomel in two or three-grain doses or two minims of croton oil in half-ounce olive oil should be given. High enema, consisting of glycerin one-half ounce, Epsom salts three ounces to six ounces, saline. When the bowels are opened give forty grains of sodii bromide and fifteen grains chloral hydrate in six ounces of saline by rectum. The bromide without the chloral may be repeated in three hours. Hot pack should be prescribed for twenty minutes; ice cap to the head and water by mouth freely during pack, if patient can swallow, otherwise Murphy drip of saline. Fifteen minims of Norwood's tincture of veratrum viride by hypo should be given, and repeated every hour in decreasing doses until the blood pressure and pulse fall. Morphin, one-third grain, should be given at the onset of the convulsion, and repeated in one hour if the convulsions continue.

3. Surgical.—When the above measures have been used and failed, and the convulsions continue to recur at more frequent intervals, the uterus

should be emptied. This can be done in several ways. If the case is not urgent or surgical means not possible, the introduction of a rubber catheter into the uterus and packing the cervical and vaginal canals are indicated. A hydrostatic bag can be introduced into the uterus and cervix dilated with water. This is a quicker means than the catheter. The cervix will generally have to be dilated before. The cervix is soft and yields, as a rule. If the blood pressure is high, rupturing the membrane often relieves it, and the case can continue on. If the cervix is rigid or unyielding, as in primipara—and five out of six eclampsias occur in primipara—then we resort to multiple incisions in the cervix or do vaginal hysterotomy. Williams prefers vaginal hysterotomy where there is no disproportion or pelvic contractions. In an institution, abdominal Cesarean section is the least injurious, especially in a primipara. I always prefer it, for I do not know of anything in surgery that is harder than a vaginal Cesarean section and high forceps in a primipara. After delivery the course outlined under the medicinal treatment should be followed if convulsions continue. Basham's mixture, 5i to 3iv, to clear up the remaining kidney involvement, acts very well.

Dr. J. A. Hendrick, Shreveport: We must use local anesthesia in these conditions. I have had cases that have done beautifully under local anesthesia. I find that under ether anesthesia you have a greater increase of toxemia than from local anesthesia. In these cases I am in favor of abdominal Cesarean section instead of vaginal Cecarean section on account of traumatism.

Dr. I. J. Newton, Monroe: I do not care to discuss but one phase of this most excellent paper, and that is, after the obstetrician has reached that stage of attendance upon the case where he feels that immediate emptying of the uterus is necessary, his judgment should obtain, and I would advocate abdominal Cesarean section as preferable to all other methods of emptying the uterus, when necessary, after the eliminative and dietetic and other measures have ceased to be of avail. The Cesarean operation is more spectacular and difficult and dangerous. It can be performed in from twenty to thirty minutes, and, on account of its surroundings, is easier for the physician who is handicapped by want of hospital or other facilities, and it is more cleanly to enter the abdomen than to resort to manipulations through the vagina. I have had quite an extensive experience in these cases in my town, and it is the experience of myself and that of others that the abdominal Cesarean section is by far the better plan for emptying the uterus under such conditions. I do not think I am making any mistake in advocating the complete removal of the contents of the uterus by abdominal Cesarean section.

Dr. S. M. D. Clark, New Orleans: I do not know of any subject that is prone to bring out a more liberal discussion than eclampsia, except it be quinin in malarial hematuria; therefore, in this particular subject, I want to touch on two or three more points. First, the importance of prohylaxis. There is no denying the fact that the obstetrical woman is not getting a square deal. You know, and I know, that the only time in many of your cases that you see your patient is when a fellow comes in town, starts to do some shopping, drops into your office and says, "Doctor, I may need you next week or a few weeks afterwards." You know absolutely nothing about the woman's pelvis; you do not know the position of the child or anything about her blood pressure or elimination. To me, that condition has to be changed in time. I think the obstetrical woman is an extremely lucky individual, judging from the results of the

usual methods and according to the treatment they get. Why is that? I believe it is because the good, conscientious man who wants to protect his wife is not properly educated. He does not know the dangers of obstetrical procedures. He does not know the many pitfalls. He has been raised in accordance with the idea of the old school that the midwife will do, and he feels that the routine fee of $15 or $25 is all that it is worth to have his wife delivered, and really I believe in many instances that is all it is worth, judging from the amount of time given to his wife. If such a man were acquainted with the hazards and the dangers of this obvious procedure he would only be too willing for his wife to receive proper treatment.

There is a great field for propaganda in a community in this regard. I feel very forcibly that if any fellow will go into a community and take a group of these people and tell them that he is prepared to do that kind of work and is going to charge more for it and is going to give these women a square deal and look after them properly the people or husbands will be only too glad to pay the extra fee. The way to avoid eclampsia is to keep hands off the patient and watch her during the entire time, and, so far as possible, educate the people not to look upon present-day obstetrics as a physiological process, but as a pathological process.

The second point I want to mention is with reference to vaginal Cesarean section. I hear men speak of it lightly. I believe, with Dr. Salatich, absolutely that it is a very difficult procedure in certain cases. Reuben Peterson tried to make us believe it was a simple procedure, and he almost convinced me, until I got into a few of these cases. With a child at full term, with an unprepared cervix, splitting the lower segment of the uterus and putting on high forceps is anything but easy, and the man to do it wants the best surroundings and should be thoroughly familiar with the anatomy of the pelvis or he will get into deep water.

The third point is the danger of post-operative hemorrhage in all toxic cases. I do not believe any man should leave an eclamptic patient under two hours after delivery. I remember one case in which I was on the eve of leaving after an hour and a half. I had my hand on the uterus. Labor was precipitated, and she had an eight months' baby. Her uterus welled up and I had a hard time to overcome it. If I had not been there she would have died. Therefore, my caution is to always stay with these women at least two hours after delivery.

Dr. J. W. Newman, New Orleans: There are three points I would like to speak of in connection with eclampsia. One point, I am sorry to say, that Dr. Miller has overlooked, and which is a most important point from the standpoint of selection of time for interference in eclamptic cases, is the renal function. I mean by that we should not be guided solely by the amount of albumin. The amount of albumin is only of relative value and not of absolute value. We can be guided as to the progress of our patients by an increase in the amount of albumin that will assist us, but the renal function test, the phthalein test, is the only reliable one. A falling off in the renal function and an increase in the blood pressure, and an increase in the rapidity of the pulse, with slight elevation of temperature, should be our guides.

Another point in regard to the treatment: Unfortunately the profession has been very slow to grasp the suggestion made by Freund, of Berlin, in 1913, and that was the use of serum in eclamptic cases. In fact, in all toxemias of pregnancy, we all know that in eclamptic patients

the nitrogenous waste products, the purin bodies are present in normal quantity. We also know in eclamptic patients that urea is not present in normal quantities; that urea is the final product of oxidation of these nitrogenous waste products; therefore, says, Freund, there must be something in the blood that interferes with the proper oxidation of the purin bodies. In working along the line suggested by veterinary surgeons who, in the case of convulsions in animals, inject ether with oxygen gas and the convulsions cease, Freund thought possibly there was something in the blood that prevented the combining of the oxygen and giving off of the oxygen to oxidize the purin bodies in the urea. On the basis that every woman who is delivered normally generates within her body the product that was necessary to oxidize these products, he withdrew the blood from one woman just delivered and injected serum into the woman in 20 c. c. doses, who was having an eclamptic convulsion, with good results. He then went a step further, on account of difficulty in getting material from time to time, and used defibrinated blood with just as good results. I came across a short article some time ago, but have not been able to put my hands on it since, so that I cannot say where it was published, in which the use of normal horse serum was suggested. I have used it in twenty-five cases of toxemia of pregnancy with splendid results at that period when we want to tide the woman over to have a viable child.

What is there in the normal horse serum which brings about such a change? It cannot be the amount of fluid, because we have injected 2,000 glucose and saline solution; it cannot be the amount of inorganic salts; there must be something contained in the serum that allows the oxygen to combine with these purin bodies and to oxidize to the stage of urea to the final waste products. I have had splendid results from the use of normal horse serum, especially in the toxemia manifested in the vomiting of pregnancy, and in about ten cases we have tided the woman over from six to seven months.

Another point I wish to speak of is with reference to the selection of the operation. From my viewpoint, the Frank extraperitoneal operation has not been accepted by the profession, and why, I cannot understand. When we see these cases with ruptured membranes that are naturally infected, that are handled possibly by the midwife, and then again handled by the doctor and brought into the institution, and then a classical Cesarean operation performed, I cannot understand why the extraperitoneal Cesarean section as advocated by Frank is not performed. It is not as difficult as one would imagine. We have had ten cases that have made uninterrupted recoveries, and, in fact, there has been no difference between the recoveries following such an opration than in the average normal obstetrical case. It is the operation to be preferred. It does away with the mutilation following high forceps, especially if we do episiotomy either unilateral or bilateral, and if we want to do a vaginal Cesarean section there is certainly everything in favor of the extraperitoneal operation.

Dr. H. E. Miller, New Orleans (closing): I want to bring out one point that I did not lay enough stress on in the paper, and that is the blood pressure in these cases. I believe a blood pressure record should be made as frequently as a urine examination. After the sixth month it should be made every two weeks. In a good many cases you can have pre-eclamptic symptoms, the woman will go on into convulsions without a great deal of kidney disturbances in one-sixth of the cases, you won't

find any albumin in the urine, a low percentage of urea, and in these cases it is the liver behind it. The liver suffers the most in the cases where you do not find severe kidney disturbanace. In five-sixths of the cases you will find urinary findings.

About dilatation of the cervix, my contention is that we should not be in too much of a hurry about it. Dilatation of the cervix is nature's method of hastening delivery, but if a practitioner goes in and roughly handles the case in bringing about dilatation of the cervix, if he makes a section of that cervix and examines it with a microscope, he will find that his operation was not a dilatation, but a laceration or tearing, and the man who does the accouchement force in an obstetrical case should prepare himself for so doing. As a rule, it ought to take twenty minutes to effect dilatation of the cervix, and nature does it by thinning or drawing back the fibers towards the fundus, and if you dilate manually you tear the muscle fibers, which complicates the subsequent pregnancy.

THE IMPORTANCE OF AN EARLY DIAGNOSIS AND TREATMENT OF MIDDLE EAR DISEASES OF CHILDREN.*

By M. P. BOEBINGER, M. D., New Orleans, La.

Since only fifteen minutes is allowed me to discuss so broad and deep a subject as middle ear diseases of children, the author shall go straight to the most important points of this paper.

Examination of External Meatus.—In order to obtain an otoscopic picture it is necessary to have a clear field. Should the drum be hidden, we must remove the obstruction by means of the forceps, suction, washings, applicators, etc.

In the normal otoscopic picture the entire drum and external canal can be surveyed. The division of the tympanic membrane into quadrants will facilitate the description of the pathological findings. Again, we note the condition of the handle of the malleus, umbo, cone of light, Shrapnell's membrane, whether drum is reddened, thickened, bulging, ruptured, mobility, etc. The Valsalva test is important for demonstration of drum perforations. Crepitant râles point to accumulation of secretion in the middle ear. Politzer's and compressed air are important aids, when available and practical.

The author now has an infant under treatment, in which he used the Valsalva method as an adjunct with most excellent results, obtaining a cure. Never use Politzer's bag, air nor Valsalva's

* Read at the 39th Annual Meeting, Louisiana State Medical Society, New Orleans, April 16, 17, 18, 1918.

method when you are dealing with a recent or active inflammation along the nasopharyngeal tract if possible.

ANESTHESIA OF THE EAR.—Susceptibility to pain differs with various parts of the ear, according to whether any particular part is normal, acutely inflamed or recovering from some affection. Paracentesis can be almost painlessly carried out with a non-inflammatory drum membrane—for instance, in suppurative otitis media; while paracentesis with an inflamed tympanic membrane is very painful without local anesthesia. Susceptibility to pain in the membranous part of the external meatus does not differ from the rest of the skin, while the osseous part of the canal is even normally very sensitive.

Generally speaking, it is easier to induce anesthesia when the epithelial layer of the mucous membrane has been destroyed; also in the presence of granulations, in chronic as compared to acute cases of inflammation. Local anesthesia may be induced in three different ways: (a) Instillation of fluid media; (b) insufflation of powders; (c) injections; (d) fluid media applied on cotton plug.

Anesthesia of the middle ear can only be accomplished by injection of 1 per cent sol. novocain or Schleich's solution. The solution is warmed and injected subperiosteally at the union of the cartilaginous and osseous parts of the external canal. Many operators prefer to use ethyl chloride; a few drops of chloroform or ether is also recommended in extensive ear work. In infants, in Dr. Dupuy's clinic and the author's clinic, we seldom resort to the use of an anesthetic—simply roll up patient in sheet and have an assistant hold him.

PREPARATION FOR PARACENTESIS.—Cleanse auricle; the external meatus is cleansed with H_2O_2, alcohol, boric acid irrigation, etc. If the patient is an infant, no anesthesia is necessary, but in older children equal parts of cocain, menthol, phenol as ear drops, usually suffice as an anodyne. Ethyl chloride is most excellent and is comparatively safe; ether is sometimes used.

Some authors recommend the injection of a Schleich and adrenalin mixture into the tympanic cavity. The operation should be done under aseptic precautions, to avoid the danger of secondary infection. If paracentesis is done at the proper time it will be followed immediately by a sero-hemorrhagic or a hemorrhagico purulent exudate. Immediate evacuation of pus shows that the operation was done too late, that the inflammatory exudate has

been completely transformed into pus, and that all middle ear spaces are replete with pus.

Acute Empyema of the Middle Ear.—Never dry or syringe, but place sterile gauze strips into canal, plug up outer canal with cotton and change often. In favorable cases there is profuse purulent discharge in the course of the next few hours. The fever gradually recedes to normal; the pain disappears completely a few hours after paracentesis. If the above fails to give relief, it is possible we are having faulty drainage or complication.

Almost any kind of a knife will suffice in the hands of an experienced surgeon. The curved one is perhaps better, in order to have a clear view. The style of incision is from above downward, from below upward, following the posterior curve of the drum membrane. The author recommends the incision along the floor of the middle ear, as this is the most dependent portion of the tympanic cavity, also being nearer the trouble-maker (eustachian tube) and avoiding the severing of the chorda tympani nerve. Of course, when we have a typical bulging to deal with we cannot select our spot.

Acute Catarrhal Otitis Media (Simple).—The otoscopic findings show no changes save a retraction of the drum; hearing is not materially reduced, feeling of fullness in the ear, subjective noises. As the inflammatory changes abate in the nasopharyngeal tract the tubo-tympanic catarrh will heal within a few days or else the conditions will grow worse and call for some form of treatment, probably constitutional and local.

Acute Catarrhal Otitis Media With Effusion.—Pain, reddened drum, more or less pronounced reduction of hearing, pressure, slight elevation of temperature, thickened drum and perhaps bulging.

Treatment.—Keep patient in bed, give hot bath, hot drinks, purgation, aspirin, etc. Treat nasopharyngeal tract at home; when patient is able to visit office, use compressed air three times weekly; post-nasal applications of solution Ag. NO_3, ⅕ per cent, and order patient to use solution Ag. NO_3, ⅛ to ½ per cent into nose t. i. d. with head lower than body and turned to diseased side. The hearing rapidly improves and a complete cure usually takes place in about two weeks. Should the above treatment fail, and we still find our patient growing steadily worse, the only remaining remedy is paracentesis. Chronic catarrh of the middle ear in early childhood is primarily traceable to chronic changes in the nasopharyngeal

space, and particularly to adenoids. The disturbed physiological function of the tube gradually leads to grave manifestations of the tympanic membrane and mucosa of the middle ear, the result being circumscribed or diffuse atrophy, with considerable retraction of the drum membrane. The treatment should be energetic and commence with the nasopharyngeal tract. The air passages should always be made permeable by operative interference, removing all obstacles. Catheterization and massage are carried out three times weekly, but normal hearing will result only in the rarest of cases. Valsalva's method should be forbidden, as it conduces to extend the atrophy. The prognosis depends upon functional findings. It is favorable if at the first examination the passage of air and bougie (Yaukauer) materially improves the hearing; otherwise it will be a waste of time for further treatment.

In some cases, indeed, the gradual transition of simple chronic middle ear catarrh into the more unfavorable chronic adhesive process cannot be arrested.

Subacute recurrent middle ear catarrh is principally observed in children suffering from adenoid vegetation, etc. Acute inflammatory swelling of the enlarged faucial tonsils occurring in the course of a common cold or coryza will in these children immediately lead to all the symptoms of middle ear catarrh. Without proper treatment by skilled and experienced physicians these relapses will increase in frequency and obstinacy. If these children contract an acute infectious disease, there is considerable danger of grave middle ear infections resulting.

SIMPLE ACUTE INFLAMMATION OF THE MIDDLE EAR—*Etiology:* In simple acute inflammation of the middle ear we have hyperemia edema of the mucosa, followed by secretion of a serous or serohemorrhagic exudate of the middle ear. Injection and swelling of the mucosa decrease in a few days, with subsequent complete cure. It is an infectious disease caused by microörganisms which, however, are of slight virility or quite degenerated.

The staphylococcus pyogenes aureus, the various forms of streptococcus and the influenza bacillus predominate. Mechanical, thermic and chemical irritation may likewise give rise to simple otitis media. Infection through the tube may also take place from sneezing, violently blowing the nose, retching, vomiting, etc.

Symptoms and Course.—A sudden pain in ear, impaired hearing, fever, continued severe pain, causing sleepless night, point to purulent middle ear disease.

Course.—The entire illness usually lasts from eight to ten days. Temperature reduced to normal; hearing increases, and pain occurs only periodically. Later the drum membrane becomes paler, when the inflammation has run its course; the drum may resume its normal condition, or else run a dragging course.

Treatment of the nasopharyngeal tract is absolutely necessary if the inflammation was caused by chronic changes of that tract. Instillation into the affected ear of anodyne remedies, applications of solution cocain hydrochlorate 5 per cent and solution adrenalin chloride to the eustachian cushion, solution argyrol 10 per cent applied to the post-nasal space, or solution Ag. NO_3, ⅕ per cent, applied to post-nasal space daily for a few days, and Ag. NO_3, ⅛ to ½ per cent, as nasal drops, t. i. d., with head lower than body and extended to diseased side. The latter treatment has afforded the author most excellent results in acute middle ear catarrhs.

Atrop. sulph., coc. hydrochl., phenol and glycerin as ear drops are also highly efficacious. As an adjunct, heat, irrigations of warm boric acid solutions, normal saline solutions applied several times daily, have a favorable effect. Thorough purgation, rest in bed, hot bath, etc., are the methods of choice in simple catarrhal otitis media. Gentle use of compressed air daily has favorable results. Do paracentesis if above methods fail to offer relief. We can never open drum too soon, when in doubt, but to neglect this operation may lead to serious results. After the inflammatory manifestations have abated, treatment of the nasopharyngeal tract must be instituted. Special attention must be given to adenoids and faucial tonsils.

Acute Purulent Inflammation of the Middle Ear.—This disease is very common in children and is caused by bacterial infection . In most cases the infection occurs through the auditory or eustachian tube from the nasopharyngeal tract. The author believes that fully 90 per cent of all middle ear disease in children springs from the epipharynx, the external meatus being responsible for conveying infection to the middle ear in traumatic suppuration. Acute suppuration of the tympanic cavity in children is frequently observed in the course of many acute affections of the nasopharyngeal tract and general infectious diseases, such as measles and scarlet fever. In all cases in which infection of the middle ear occurs through the tube there will be swelling of the tubal mucosa, which rapidly spreads to the mucosa of the middle ear (attic,

antrum and often the mastoid process), are filled with an infectious exudate. Ulceration sets in shortly, leading to copious exudation into the middle ear spaces, the pus eventually perforating the tympanic membrane. The secretion is often blood-tinged at first, but will become purulent only at a later stage, the secretion still later becoming stringy, pus diminishes from day to day, and is gradually replaced by mucus. When the secretion has been arrested the perforation closes in normal cases and there will be anatomical and functional restoration to normal.

Symptoms.—The prominent symptom is violent pain in ear, which sets in suddenly; loss of rest and sleep, loss of hearing, but later returns toward end of disease; high temperature. A sudden drop of temperature to normal or subnormal in the first days of the inflammation is an unfavorable symptom, unless it is accompanied by an abatement of all other pathological manifestations (often seen in early intracranial involvement).

The second stage is characterized by suppuration. There is no pain; temperature is normal or slightly elevated; profuse secretion of pus during first few days, which decreases in about seven days. Later the pus becomes stringy, and still later consist of almost pure mucus; the secretion lasts two to three weeks. The final stage sets in with the arrest of the discharge and with the gradual filling of the perforation. Extensive perforations require more time to heal.

It may be difficult to decide at first examination whether there is simply an inflammation of the external meatus or a middle ear suppuration besides, especially if there is a multiple furunculosis of the external auditory canal with considerable pus. A tugging or pulling of the auricle will elicit pain, if the seat of the trouble is in the external meatus; no pain if disease is in the middle ear. The otoscopic picture, pus, history, etc., will assist in arriving at diagnosis by exclusion. Treatment is about the same as for acute catarrhal otitis media with effusion, unless we are dealing with perforation, then we should employ cleansing agents, ear irrigations, and strive to assist drainage and ventilation. Locate seat of trouble and correct.

Large perforations are usually the result of neglected treatment, badly managed or chronic suppurative otitis media, and the prognosis is usually bad, while small perforations hold out better prospects, and by energetic and heroic treatment may close spontaneously or else interfere with the proper drainage and call for a counter opening. This can easily be recognized by failure to re-

lieve pain—small amount of secretion, and perhaps damming back of pus through antrum with mastoid symptoms.

Exploratory Paracentesis.—When in doubt as to whether a patient has middle ear disease in obscure cases, running a high temperature, pain, etc., an exploratory paracentesis is justifiable, if done under aseptic precautions, as we can do very little harm, and often it is better to open the drum membrane too soon rather than too late. Bleeding following paracentesis usually denotes middle ear disease.

Symptomatic Peculiarities in Infantile Otitis.—The general practitioner should examine the ears of infants and young children in all febrile affections, even in the absence of symptoms. The possibility of overlooking an inflammation, or even suppuration of the middle ear, is increased by the helplessness of the infant. It is not before the fourth month that infants direct attention to the possibility of an auricular affection by rubbing the ear, putting hand to head, crying whenever the ear or its vicinity is touched, and even avoiding to lie on the affected side. Pus from the tympanic cavity may escape through the eustachian tube, which is short and wide.

Suppuration of the middle ear occurs less frequently in the breast-fed than bottle-fed infants. Owing to congenital cracks of the osseous facial canal there is greater danger in infantile otitis than in otitis media of the adult, of peripheral paralysis of the facial nerve, due to spreading of the inflammation to the connective tissue enveloping the nerve, but any such paralysis is only slight and will disappear in a few days or at the most two or three weeks.

An extremely characteristic symptom of acute infantile otitis is the sudden onset of fever, in which the temperature reaches the highest possible degrees in the first few days. The fever is up to 104°. The temperature is of the continuous type and returns to normal, or abnormal temperature is usually a sign of complications. A peculiarity of infantile otitis consists in the great danger of abscess formation in the mastoid, which is favored by the large antrum being loosely connected with the middle ear. These abscesses very rapidly perforate outward, forming a subperiosteal mastoid abscess, the lateral wall of the antrum being a very thin osseous layer, which often contains cartilaginous remnants in rachitic children. This cartilage rapidly ulcerates, a fistula and subperiosteal

abscess resulting. After complete development of an empyema of the middle ear, the fever may abate or entirely disappear without perforation of the membrane, but spontaneous perforation may still later occur.

Discussion of the Paper of Dr. Boebinger.

Dr. C. A. Weiss, Baton Rouge: The essayist has covered the subject so fully that there is very little to say on it. Any one who has witnessed the dire results of what started to be a simple earache cannot help but be impressed with the importance of this subject, and I desire to emphasize a few points the essayist has brought out. A very important point in the examination of children is the way you hold the auricle. If you pull the auricle downward and backward you get a better view of the tympanum than if you pull it in any other direction.

In regard to the examination again, we do not want to be deceived by the white appearance we see at the external auditory canal. That may be an exfoliation of the dead epithelium in front of the drum. If this subject is to appeal to the general practitioner, I think our appeal is more in the capacity of preventing middle ear disease rather than curing it after the disease has been established. Just the mere application of a hot-water bag and Pollitzer inflation does not end the picture at all. I think the exudates that have been formed there and have become plastic and have caused adhesions produce more after-effects, which are deleterious to the hearing of the patient, than the primary disease itself. All of our cases with either partial or complete deafness in after-life are started with one or two attacks of earache in childhood.

As regards education, we ought to educate the parents as to the prevention of the disease, as there are so many fallacies connected with this. So many parents bring their children to the physician whose ears have been running for three or four weeks, and when the doctor says, "Why didn't you have the child's ears treated before?" they say that every teething child is expected to have a running ear, and that is one of the fallacies we ought to eradicate.

As far as anesthesia is concerned, up to the age where the child can offer active resistance, we do not require anesthesia. If any one has seen a child suffering with acute earache, with nervous symptoms, with beads of perspiration on its forehead, tossing around the bed, the mere opening of the drum will transform the picture almost immediately. The child becomes quiet, falls off into a peaceful slumber, and the next day the child suffers no more. If that does not relieve the condition there is another picture presented, when we have to introduce more active measures.

In talking to the parents about the prevention of this trouble, the mother should be instructed against having the child blow its nose forcibly. After the child is old enough to blow its own nose, forcible atomization of the nose with fluids under pressure should be cautioned against.

In the closure of the drum, as long as the ear is suppurating, I think it is a bad idea to allow the drum to close, and, as a rule, it will not close as long as the ear is suppurating; but if we have a sero-sanguinolent discharge there is a tendency for the drum to close, and under such circumstances it is best to keep it open.

The keynote of the treatment is depletion, both constitutional and local, therapeutic and surgical, and, if constitutional, local and therapeutic measures do not do the work, in this affection more than anything else we make use of the lancet because it does relieve when nothing else will an acute condition.

So far as the after-treatment is concerned, if we inculcate into our teaching of parents the importance of taking care of the naso-pharyngeal space with the same degree of interest that they do the eyes of the newborn, and feeding of children, we will have advanced to the consummation of the happy end of this very important subject.

Dr. Homer Dupuy, New Orleans: This most excellent paper specifically states that it deals with the early diagnosis and treatment, and therefore I shall try, as far as possible, to hew to the line and base my remarks principally on the early diagnosis and treatment of middle ear infection in infants.

The essayist has laid stress on some points, and I desire to re-emphasize what he has already said. First, as regards the symptoms of middle ear infection in infancy before perforation of the drum: If there is no discharge from the ear, what are the symptoms? Only two are possible, namely: pain and temperature. The infant unfortunately does not specifically by his actions give you an absolute idea that his trouble lies in the ear, or, if it does lie in the ear, he may shake his head from side to side; but which is the ear? You cannot rely on the pain symptom alone. The temperature is more reliable, provided you can be broad enough to institute other things. In other words, probably with a temperature running from 99° to 104°, with the child tossing its head around, you may suspect ear trouble, and you may not look for other things first. We have three vulnerable areas in the infant's life—the lower respiratory tract, the gastrointestinal tract, and the middle ear. If you exclude the lower respiratory tract and the intestinal tract, then certainly you must look to the middle ear as the possible cause for the temperature. I said before perforation of the drum, but even so, supposing the infant has otorrhea or a discharge from one ear, and still goes on screaming and has a temperature, what then? Even then the perforation on the side which is discharging may be too small; it may be a pinhole perforation, allowing only a small escape of pus, and the pain still continues, and so does the temperature. Again, the child has two ears—right and left. The right one is discharging, possibly, and you have directed all of your attention to one side, forgetting the other side. The pain is continuous; the temperature keeps up because the child has trouble in the other ear.

As to the symptoms without perforation, in spite of the discharge from both ears, or a profuse otorrhea on both sides, the temperature may keep up, it being 99° in the morning and 104° in the afternoon. Again, you must be sure about excluding the condition of the lungs. If you have done so, in spite of profuse otorrhea in both ears, you can get help from a blood count. With profuse otorrhea from both sides and a high blood count, you may suspect a baby, although only three months of age, may have a mastoid antrum infection.

As to treatment before perforation, the baby has pain, the baby has temperature, and you have proven by the examination that you wish to do something for him. Dr. Boebinger lays stress on cocain, adrenalin and so forth. If you remember the drum membrane is composed of epithelial cells, it makes simply mechanically impossible for the solution

to gain access to the middle ear to relieve the pain, still less infection. What does the work? The heat. All your drops composed of cocain, adrenalin and so forth do not do the work, but it is the heat that does the work **per se**; therefore, I cannot lay stress on any special solution. In fact, if any one solution can be used with safety I would lay stress on adrenalin; and why? Because the first picture in a middle ear infection, so far as we can see it from the outside, is a highly hyperemic drum membrane, and adrenalin solutions, 1 to 1,000 or 1 to 3,000, heated, of course, applied to the canal, may, by producing ischemia, reduce or relieve the pain. I admit that. Oils ought to be condemned, not because they do not give relief; they do, but not **per se**. But you heat the oils, and it is the heat that the oil transmits to the drum membrane which affords relief of pain. But the oil cakes up in the canal, and when you attempt to get other information of what is going on behind the drum membrane the canal has to be cleansed; it is a hard job sometimes, and therefore oil solutions interfere very much with future observations and ought to be condemned on principle. Before perforation, heat applied with the hot-water bag is possible, but not to the infant. I shall limit myself to adrenalin solutions, because they can produce ischemia and the adrenalin can address itself to the primary stage of infection of the middle ear hyperemia. If the temperature and pain keep on for twenty-four hours our next step, as already described by the essayist, is incision of the drum—not a paracentesis, but a free incision of the ear-drum. Now, in the infant, oftentimes it is so small that you can hardly see your way through it. You can hardly see absolutely within the affected ear the right side; it looks off color. The left may be comparatively normal and still be on the safe side. I say this because we know that tympanotomy is, **per se**, innocuous. You may not do any harm whatever. There is no danger of injuring a blood vessel of any size; you can hardly injure the facial nerve or brain. Tympanotomy is innocuous **per se**. Therefore, in the incision of the drum in infants around the first six months of life, I would never be satisfied personally by incising the drum; I am not prepared, because I would not be absolutely sure I could put my finger on the right side only. The baby has two ears, and both are liable to be affected. You open the right side; the temperature rises to 99° to 104°, and unfortunately you devote your attention to that same side without thinking about the mastoid condition. Tympanotomy is justifiable in infants and should always be done on both sides for fear you may neglect to open the right or both sides.

Dr. William T. Patton, New Orleans: There is one point that strikes me as being of considerable importance in addressing an audience of general practitioners. We cannot all expect to be specialists. The most important thing in doing ear work is to see. We may tell you what to do, how to do it, but can you do it? The opening of the ear-drum is not a simple matter. I have opened many ear-drums, and there are some ear-drums that I find very hard to open. Take a child, and it is a comparatively simple matter to open the drum. On the other hand, if you take a baby six months old, even the specialist will have a hard time in finding the ear-drum, and you do more damage in trying to open the ear-drum unless you can see, and I venture to say in 80 per cent of such cases you will not open the drum. If you consider the anatomy of the child you will find that the posterior canal goes straight in, and the ear-drum is a continuation of the posterior canal. If you stick a knife in the infant's ear you should be able to see the opening with the head

mirror, but if you have not a head mirror you must see that the rays of light are focusing on that ear-drum, or you cannot see it at all, and you will not be able to treat the ear-drum unless you can see it. With the knife, the opening is made in the posterior canal, you get bleeding, the temperature does not drop, and the patient gets no relief. This is not infrequently done by specialists.

In regard to anesthesia: In patients up to one or two years of age I hardly ever use a local or general anesthetic; but take a child two years of age, that is obstreperous, and it is a different proposition. Five people can hardly hold a two-year-old child from moving and wiggling, and on two separate occasions I have seen local anesthesia used in such cases. In one case in which no anesthesia was used an attempt was made to open the ear-drum and the child jumped and wiggled to such an extent that the external canal was slit right open. Remember how close you are to the brain and jugular and carotid when you are opening a baby's ear-drum. With the least slip inside you will get into the labyrinth, the jugular or carotid. In very young children that are obstreperous I think it is very essential to use an anesthetic. Gas is preferable, but it is expensive. Ethyl chlorid is a safe anesthetic for these cases. If you use cocain, menthol and carbolic solution, you are using about 32 per cent carbolic acid. If you leave the solution two minutes you will get very little or no anesthetic effect. That solution put on a cotton probe and pressed against the ear-drum should stay there ten or fifteen minutes, to get the full anesthetic effect. When you take that out you have got a blanching of the ear canal from the carbolic acid, and the safe thing to do is to immediately apply alcohol to neutralize the carbolic solution, you get very little trouble from it.

In opening the ear-drum the incision should be made high up and down low. In the upper part of the ear-drum you meet with a flaccid membrane, and there are a lot of ligaments which separate the middle ear from the attic, and there may be secretion coming from up in the attic, which is thrown back into the aditus and antrum. If you do not make the incision high up, the ligaments will block or interfere with drainage, and you do not drain the most dependent part. You are draining the aditus through the antrum. The incision should be made low down and high up in order, to establish good drainage. Perforation in the center of the ear-drum will not do much good.

With reference to the use of oils, which was spoken of by Dr. Dupuy, I want to emphasize the point that we should hesitate to use oil of any kind in the ear. It is true it does good by its heat, but it soon cakes up and it takes as long a time to remove it as it does impacted cerumen or wax out of the ear. Druggists always advise green oil. I do not know what it is exactly, but it has some opium in it. It does not do any good except by the heat it generates; it cakes up and you get difficulty in removing it. Ten grains of carbolic to half an ounce of glycerin can be used, and the carbolic acid and glycerin, with heat, will relieve the earache. Dr. Dupuy said that cocain had no effect on the skin. Menthol and carbolic acid both act on the skin. If you rub it on your hand or anywhere you get numbness. The same thing happens in the ear. Ten per cent carbolic acid in glycerin acts on the ear and relieves pain. The glycerin is hygroscopic; it does not cake, and it is an ideal agent for pain in the ear. If the ear-drum continues to pain, it should be opened. If you cannot get a specialist to assist you, and you are not accustomed to using a head mirror in the country, then I would advise that you

spend a week or ten days in one of our clinics, where you can be shown how to use the head mirror, and do it as well as we can, seeing is the main thing in opening the ear-drum.

Dr. Boebinger, New Orleans (closing): My chief laid stress on anodyne preparations. Fully 90 per cent of all middle ear troubles begin in the epipharynx, and I still maintain that it is the experience of the majority of men doing ear, nose and throat work. Therefore, if that is so, why monkey with anodyne preparations, or drops of any kind, with the external auditory meatus when the discharge is coming from the epipharynx? Why not go to the seat of the trouble? The outer layer of the drum membrane is cutaneous; it will not take up oils and probably lots of other things.

I am not going to answer Dr. Patton, because he did not answer me. My chief said that there is very little danger in opening the ear-drum. You will find the roof of the jugular fossa often extending up into the middle ear, and very often the roof of the jugular fossa is either missing or is detached, and the jugular vein or bulb extends up into the middle ear; therefore, if you are unskilled, if you lack experience, you can positively cause serious and grave hemorrhage in puncturing the jugular bulb.

Dr. Homer Dupuy: I would like to ask Dr. Boebinger how often he has seen injury done to the jugular vein from tympanotomy, or has he ever seen a case?

Dr. Boebinger: I have heard of two such cases. In answer to Dr. Patton, who says that you cannot see to open the ear-drum, I want to call attention of the general practitioners to the point that when you are doing a mastoid operation in a young child after the second or fourth year, where the mastoid process is developed, or where there is no mastoid developed, and a very simple antrum, I have seen time and again where you could not see what you were doing, but you can positively puncture the ear-drum and will hear a crackling sound like driving a knife through a piece of tissue paper.

With reference to the use of ethyl chlorid as an anesthetic, when I was resident at the Eye, Ear, Nose and Throat Hospital—and I left there in 1912—we had a record of 20,000 cases anesthetized with ethyl chlorid without a death. Therefore it is a very safe and simple method of anesthesia to use in young children who are kicking up in opening the ear-drum. As far as opening the ear-drum high up is concerned, I called attention to the fact that the most dependent portion of the middle ear was along the floor, remembering that the floor of the middle ear is lower than the floor of the external auditory canal, and you need as much drainage as you can possibly get. We must not forget what the text-books say about the eustachian tube being a trouble maker. If that is so, why not go as near to the trouble-maker as you can get? If I have bulging in the anterior quadrant I must go there. Other things being equal, I would take the floor in preference to the posterior incision. While the antrum is a big field, I would take the closed eustachian tube, because that is the trouble-maker.

COMMUNICATION

PROCAIN AND NOVOCAIN IDENTICAL.

To the Editors:

It appears that in certain quarters the attitude is taken that the local anesthetic sold as procain is not identical with that marketed as novocain. The Subcommittee on Synthetic Drugs of the National Research Council believes it important that this misunderstanding should be corrected, and hence offers the following explanation:

The monohydrochloride of para-amino-benzoyldiethyl-amino-ethanol, which was formerly made in Germany by the Farbwarke vorm. Meister, Lucius and Bruening ,Hoechst A. M., and sold under the trade-marked name of novocain, is now manufactured in the United States. Under the provisions of the Trading-With the-Enemy-Act, the Federal Trade Commission has taken over the patent that gave monopoly for the manufacture and sale of the local anesthetic to the German corporation, and has issued licenses to American concerns for the manufacture of the product. This license makes it a condition that the product first introduced under the proprietary name "novocain" shall be called procain, and that it shall in every way be the same as the article formerly obtained from Germany. To insure this identity with the German novocain, the Federal Trade Commission has submitted the product of each firm licensed to the A. M. A. Chemical Laboratory to establish its chemical identity and purity, and to the Cornell pharmacologist, Dr. R. A. Hatcher, to determine that it was not unduly toxic.

So far, the following firms have been licensed to manufacture and sell procain:

The Abbott Laboratories, Ravenwood, Chicago.
Farbwerke-Hoechst Company, New York, N. Y.
Rector Chemical Company, Inc., New York, N. Y.
Calco Chemical Company, Bound Brook, N. J.

Of these, the first three firms are offering their products for sale at this time, and have secured their admission to new and non-official remedies as brands of procain which comply with the new and non-official remedies standards.

While all firms are required to sell their product under the official name "Procain," the Farbwerke-Hoechst Company is permitted to use the trade designation "Novocain" in addition, since it holds the right to this designation by virtue of trade-mark registration.

In conclusion, procain is identical with the substance first introduced as novocain. In the interest of rational nomenclature, the first term should be used in prescriptions and scientific contributions. If it is deemed necessary to designate the product of a particular firm, this may be done by writing "Procain—Abbott," "Procain—Rector," or "Procain—Farbwerke" or "Procain (Novocain brand)."

JULIUS STIEGLITZ, *Chairman,*
Subcommittee on Synthetic Drugs, National Research Council.

The official names so far adopted by the Federal Trade Commission are:

Arsphenamin for the drug marketed as salvarsan, diarsenol and arsenobenzol, etc.

Neorsphenamin for the drug marketed as neosalvarsan, neodiarsenol and novarsenabenzol, etc.

Barbital for the drug marketed as veronal.

Barbital-sodium for the drug marketed as medinal and veronal-sodium.

Procain for the drug marketed as novocain.

Procain nitrate for the drug marketed as novocain nitrate.

Phenylcinchoninic acid for the drug marketed as atophan.

NEWS AND COMMENT

THE COMMENCEMENT of the Tulane University of Louisiana was held at the French Opera House on June 5 at 11 a. m. At this, the eighty-ninth graduation exercises, degrees were conferred on a total of 172 candidates, of whom sixty-one were in medicine and four in pharmacy. The dean of the graduate school of medicine reported a total attendance during the term of 205 physicans. The orchestration was under the direction of the Newcomb School of Music, the selections being excellent and well executed. The first stanza of "America" and of the "Star-Spangled Banner" was sung by the entire audience at the beginning and the end of the program, respectively. The alumni address, delivered by Edward H. Randolph, of Shreveport, was both eloquent and timely. The conferring of degrees by the president, Dr. Robert Sharp, was made more than usually impressive, owing to the approaching voluntary retirement of that much-loved and esteemed official.

THE AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY will hold its twenty-third meeting in Denver, August 5, 6

and 7. Dr. Lee Masten Francis, 636 Delaware avenue, Buffalo, is the secretary.

Association of American Physicians Elects Officers.—At the meeting of the Association of American Physicians, May 7 to 11, the following officers were elected: President, Dr. Alexander McPherdran, Toronto; vice-president, Dr. Herman M. Biggs, New York; secretary, Dr. Thos. McCrae, Philadelphia; recorder, Dr. William W. Ford, Baltimore; treasurer, D. Joseph A. Capps, Chicago; councilors, Dr. Theobald Smith, Princeton, N. J., and Dr. Chas. F. Martin, Montreal, Canada. The 1919 meeting will be held in Atlantic City during May.

Pediatric Society Elects Officers.—At its thirtieth annual meeting, held in Lennox, Mass., May 27, 28 and 29, the American Pediatric Society elected the following officers: President, Dr. Edwin E. Graham, Philadelphia; vice-president, Dr. Henry Heiman, New York City; secretary, Dr. Howard C. Carpenter, Philadelphia; treasurer, Dr. Chas. Hunter Dunn, Boston, and recorder, Dr. Oscar M. Schloss, New York City. The next meeting will be held at Atlantic City.

Legacy to Johns Hopkins.—The Johns Hopkins University and the Johns Hopkins Hospital have received a legacy valued at $700,000, which is to be divided equally between the university and the hospital, without any restrictions as to its use.

Louisiana Nurses' Board of Examiners.—The semi-annual examination of the Louisiana Nurses' Board of Examiners was held in New Orleans and Shreveport, May 20-22. One hundred applicants qualified as registered nurses, many of whom will enter the Red Cross service and will soon be doing duty "Somewhere in France." The board is composed of the following: Dr. J. T. Crebbin, New Orleans, president; Dr. J. S. Hebert, New Orleans, acting secretary; Dr. C. A. Bahn, Base Hospital No. 24; Dr. G. S. Brown, New Orleans, and Dr. F. J. Frater, Shreveport.

To Speed Training of Public Health Nurses.—The American Red Cross has allotted $25,000 to the Henry Street Settlement, New York City, for the purpose of speeding up the training of public health nurses needed here and for reconstruction work in France. The course will be open to three-year undergraduate nurses and the term will be from June 1 to September 30.

Death Rate From Tuberculosis in the Principal Cities of

THE UNITED STATES.—According to a bulletin published by the Health Department of Chicago, among the ten principal cities of the United States Pittsburgh has the lowest death rate from tuberculosis, for the year 1917, the rate being 147.05 per 100,000 population. Chicago is a close second, with a rate of 148.67. The rates of other cities in this group are: Detroit, 160.66; Boston, 170.87; Clevelanad, 174.7; New York, 176.75; Philadelphia, 194.81; Los Angeles, 199.42; St. Louis, 202.95, and Baltimore, 236.61.

MEDICAL SCHOOLS HOLDING SUMMER SESSIONS.—In compliance with a request from the War Department, a number of medical schools throughout the country are continuing the school session through the summer months. By a continuous school session, the junior students will graduate four or five months earlier than otherwise, thereby releasing them for government service.

PARIS ANTI-CANCER INSTITUTE.—An anti-cancer institute, similar to those working in London, New York, Chicago, and the one established by Czerny at Heidelberg, is soon to be founded in Paris. All patients, rich or poor, suffering from tumors will receive the care required for each particular case. There will be laboratories for the use of students, regardless of their nationality, who are interested in the study and treatment of cancer.

SOUVENIRS FROM FRANCE.—The Harvard Medical School has received from Dr. Harvey Cushing, head of the Harvard medical unit in France, a collection of souvenirs, including several pathological specimens from the cases of cranial injury. The Warren Museum will receive these gifts.

DENTAL CLINIC DESTROYED.—The dental clinic at Tuft's Medical School, Boston, was recently destroyed by fire, with a damage amounting to $25,000. The students aided in saving the fittings of the dental room and the property used for research purposes. The work of the clinic will be carried on in another building.

HOSPITAL FACILITIES IN THE UNITED STATES.—The Medical Section of the Council of National Defense, Washington, D. C., has established a central bureau of information concerning the hospital facilities of the United States in war-time. Information regarding over 1,000 active hospitals has been collated and indexed, and the data will be kept up to date from month to month. Full data will also be collected concerning nearly 8,000 other institutions. A record will be kept of the number of doctors, interns and nurses contributed by each hospital to the service.

Army Medical Department Moves Into New Building.—The offices of the Surgeon General of the Army and the Medical Corps of the Army have been moved into one of the new war buildings recently constructed at Sixth and B streets, Washington, D. C.

Dr. Carrel's Hospital Destroyed.—In spite of the fact of a constantly flown flag bearing a large red cross and an immense white flag on its lawn as a further mark of identification, the hospital established near the front by Dr. Alexis Carrel, of the Rockefeller Institute, has been persistently bombed by German aviators and almost destroyed. Dr. Carrel will install his hospital in Paris or the suburbs.

State Board Examinations, 1917.—There were 2,605 graduates of 1917 and 4,253, altogether, examined, 96 colleges being represented. The failures were 7 per cent for Class A colleges; 18.4 per cent for B; 35.4 per cent for C; 41.7 per cent for foreign schools; 46.8 per cent for undergraduates. The maximum number of licenses was granted in 1906, the minimum in 1917, numbering 7,865 and 4,061, respectively. Thirty-eight States required one year of collegiate study; thirty, two or more.

Iowa Medical Society Bans German Instruments.—At its annual meeting on May 1, the Iowa State Medical Society passed resolutions declaring that it should be considered an evidence of pro-Germanism for any members of the Society for the next fifty years to purchase instruments or appliances or other articles made in Germany.

Health of the United States Army.—Surgeon General Gorgas, in an address recently delivered in Chicago, is quoted as saying that the United States Army has surpassed the record of the Japanese Army, heretofore considered the model of the world, in holding down the percentage of disease among its forces.

Personals.—Dr. Edward J. DeBergue was named assistant city coroner to succeed the late Dr. C. W. Groetsch. Dr. DeBergue served two years as private assistant to Dr. Joseph O'Hara, city coroner.

Word has been received from "over there" that Dr. J. G. Dempsey has been placed in charge of one of the large tuberculosis hospitals in France.

Removals.—*Archives of Pediatrics*, from 241-43 West Twenty-third street, to 45 East Seventeenth street, New York City.

Died.—On June 12, 1918, Dr. Arthur W. de Roaldes, aged 69 years, a native of Opelousas, La.

BOOK REVIEWS AND NOTICES

The American Illustrated Medical Dictionary, by W. A. Dorland A. M., M. D., F. A. C. S. Ninth edition, revised and enlarged. W. B. Saunders Company, Philadelphia and London.

Besides the enlargement necessary to the growing terminology of medicine, this edition of one of the standard American dictionaries has aimed at an additional service in putting the name of the individual who has been identified with the word defined. This will mean that the name refers either to the discoverer or the originator of the term, disease or thing named. Babinski's reflex, Argyll-Robertson pupil, Duhring's disease, the Widal reaction, are instances where the identity of the individual, with data of birth, nationality, etc., are given. Such an innovation will be much appreciated, as to many medical men just such information has been long wanted, and biographical references are not found everywhere. The general make-up and detail in arrangement conforms to previous editions of this book, and the demand for a ninth edition should speak for its continued popularity. DYER.

Diseases of the Skin, by Richard L. Sutton, M. D. Second edition. C. V. Mosby Company, St. Louis.

Among the several standard texts on skin diseases, Sutton's work holds a firm place. A second edition in so short a time indicates its popularity. More than a hundred new illustrations have been added and several new articles are noted. DYER.

Diseases of the Skin. Their Pathology and Treatment, by Milton B. Hartzell, A. M., M. D., LL. D. J. B. Lippincott Company, Philadelphia and London.

The author's long service in this special field has encouraged the publication of the work in review. It commends itself as an expression of its author's views and observations, with such references as so large a work must demand in according credit to others. The illustrations are numerous. The articles on Eczema, Pemphigus and Syphilis are especially noteworthy for their scope and original handling. The classification of the diseases discussed is a departure from that usually followed, and this may be open to criticism, if the work is to be used as a textbook. Tinea versicolor, for example, finds place among the anomalies of pigmentation, while pinta is classed with the vegetable parasitic diseases, in a general group of inflammations. The dermatologist will appreciate and understand the individual vagary of such procedure, but the medical student or practitioner might be confused.

Throughout, the author has left the imprint of his keen sense of the importance of the pathology of skin diseases, and, where this has been of diagnostic value, due emphasis has been laid.

Altogether, Dr. Hartzell has added materially to American dermatology by this work. DYER.

Clinical Cardiology, by Selian Neuhof, B. S., M. D. The MacMillan Company, New York.

By means of many illustrations, careful text and systematic detail, the subject of cardiology is excellently presented. The mechanism of apparatus is fully explained and then applied to all phases of irregular

cardiac conditions. Diagnostic methods, differential points and associated findings are given. Blood pressure and its occasion, with concomitant symptoms, are discussed fully. Therapeutic suggestions also find place. In small space, a comprehensive guide has been afforded, which is timely and should render large service. DYER.

Recollections of a New York Surgeon, by Arpad G. Gerster, M. D. Paul B. Hoeber, New York.

At the edge of his threescore and ten years, Dr. Arpad G. Gerster, over forty years resident in New York, writes of his life. It is interesting throughout. Of Swiss origin, the early life and growth of this well-known surgeon cast excellent sidelights on the political, economic and social life in Europe during the mid-period of the last century. Among the many who emigrated from Europe to America, both Gerster and his sister, the prima donna, have made mark in the country of their adoption.

Necessarily such a book must be saturated with the personality of its chief topic, but the names of many contemporaries appear, of whom intimate glimpses are given.

His long active service with the New York Polyclinic affords the author excellent opportunity of connoting some of its faculty. Lange, Stimson, Markoe, Bull, McBurney, Wyeth, all are sketched in the narrative.

At sixty-three, "then still vigorous," the author joined the Medical Reserve Corps, firm in his belief of universal military service. Says the author: "The tonic and wholesome asperities of military discipline are needed in this our commonwealth to limit the egotistic excesses of an unchecked individualism; they alone can correct the trend of prevalent selfishly utilitarian views of life towards luxurious effeminacy and lawlessness."

Much of a wise philosophy is spread through this biographic narrative—natural enough for one who has lived such a life.

The story of a successful carrier is always a stimulus to those coming on, and it is therefore worth while to sit apart in these days of turmoil and stress and read the story of one who puts his mantle aside—with the thought that—

"Serenely will he wait the final call, and bowing his head in meekness will say, 'Nunc dimittis, Domine.'" DYER.

PUBLICATIONS RECEIVED

W. B. SAUNDERS COMPANY, Philadelphia and London, 1918.

A Text-Book of Obstetrics, by Barton Cooke Hirst, A. B., M. D., LL. D., F. A. C. S. Eighth edition, revised and reset.

Text-Book of Embryology, by Charles William Prentiss, A. M., Ph. D. Revised and extensively rewritten, by Leslie Brainard Arey, Ph. D. Second edition, enlarged.

Chemical Pathology, by H. Gideon Wells, Ph. D., M. D. Third edition, revised and reset.

The Practice of Pediatrics, by Charles Gilmore Kerley. Second edition, revised and reset.

The Elements of the Science of Nutrition, by Graham Luck, Ph. D., Sc. D., F. R. S.

Differential Diagnosis. Volume 11. Presented through an analysis of 317 cases. By Richard C. Cabot, M. D.

The Principles of Hygiene, by D. H. Bergey, A. M., M. D., D. P. H. Sixth edition, thoroughly revised.

A Treatise on Clinical Medicine, by Wm. Hanna Thomson, M. D., LL. D.

The Nervous System and Its Conservation, by Percy Goldthwait Stiles. Second edition, revised.

The Medical Clinics of North America. March, 1918. Vol. 1, No. 5.

Principles of Surgical Nursing, by Frederick C. Warnshuis, M. D., F. A. C. S.

C. V. MOSBY COMPANY, St. Louis, 1918.

The Treatment of Cavernous and Plexiform Angiomata by the Injection of Boiling Water (Wyeth Method), by Francis Reder, M.D., F.A.C.S.

Emergencies of a General Practice, by Nathan Clark Morse, A. B., M. D., F. A. C. S.

Oral Sepsis in Its Relationship to Systemic Disease, by William W. Duke, M. D., Ph. B.

Interpretation of Dental and Maxillary Rœntgenograms, by Robert H. Ivy, M. D., D. D. S.

WASHINGTON GOVERNMENT PRINTING OFFICE, Washington, D. C.

Public Health Reports. Vol. 33, Nos. 20 and 21.

Field Identification of Malaria-Carrying Mosquitoes, by Ernest A. Sweet.

MISCELLANEOUS:

Sickness Insurance or Sickness Prevention? (National Industrial Conference Board, 15 Beacon street, Boston.)

Report of the Board of Administrators of the Louisiana Hospital for the Insane of the State of Louisiana. Biennial period ending March 31, 1918.

Shall Disease Triumph in Our Army? by Major Louis Livingston Seaman. (Published by American Defense Society, Inc., 44 East Thirty-third street, New York.)

Monthly Bulletin of the Louisiana State Board of Health. Vol. 7, No. 8, New Orleans.

REPRINTS.

Some of the More Important Advances in the Diagnosis and Treatment of Tuberculosis, by Francis M. Pottenger, A. M., M. D., LL. D.

Infections With Coccidium and Isospora in Animals in the Philippine Islands and Their Possible Clinical Significance, by Frank G. Haughwout.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans, for May, 1918.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	9	3	12
Intermittent Fever (Malarial Cachexia)	1	2	3
Smallpox			
Measles	7		7
Scarlet Fever			
Whooping Cough	3	2	5
Diphtheria and Croup	1		1
Influenza	6	13	19
Cholera Nostras			
Pyemia and Septicemia	1		1
Tuberculosis	42	60	102
Cancer	31	7	38
Rheumatism and Gout	1		1
Diabetes	6	2	8
Alcoholism		1	1
Encephalitis and Meningitis	2	3	5
Locomotor Ataxia	1	1	2
Congestion, Hemorrhage and Softening of Brain	25	14	39
Paralysis	3		3
Convulsions of Infancy	1		1
Other Diseases of Infancy	11	12	23
Tetanus	1		1
Other Nervous Diseases	4		4
Heart Diseases	54	52	106
Bronchitis	1	2	3
Pneumonia and Broncho-Pneumonia	23	29	52
Other Respiratory Diseases		2	2
Ulcer of Stomach	2		2
Other Diseases of the Stomach	3	1	4
Diarrhea, Dysentery and Enteritis	31	16	47
Hernia, Intestinal Obstruction	4	6	10
Cirrhosis of Liver	3	3	6
Other Diseases of the Liver	5	1	6
Simple Peritonitis			
Appendicitis	2	2	4
Bright's Disease	29	19	48
Other Genito-Urinary Diseases	10	7	17
Puerperal Diseases	7	2	9
Senile Debility	2		2
Suicide	4		4
Injuries	21	7	28
All Other Causes	30	28	58
TOTAL	387	297	684

Still-born Children—White, 18; colored, 18; total, 36.

Population of City (estimated)—White, 276,000; colored, 102,000; total, 378,000.

Death Rate per 1,000 per Annum for Month—White, 16.58; colored, 34.27; total, 21.38. Non-residents excluded, 18.15.

METEOROLOGIC SUMMARY (U. S. Weather Bureau).

Mean atmospheric pressure. 30.07
Mean temperature. 76
Total precipitation. . . . . 2.79 inches
Prevailing direction of wind, southeast.